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IN THE

SUPREME COURT OF THE UNITED STATES

October Term 1974

No. 73-7031

JESSE THURMAN FOWLER,

Petitioner,

v.

NORTH CAROLINA,

Respondent.

On Writ of Certiorari to the Supreme Court of North Carolina

REPLY BRIEF FOR PETITIONER

JACK GREENBERG
JAMES M. NABRIT, III
DAVID E. KENDALL
PEGGY C. DAVIS
10 Columbus Circle
New York, New York 10019

ANTHONY G. AMSTERDAM
Stanford University Law School
Stanford, California 94305

ADAM STEIN
CHARLES L. BECTON
Chambers, Stein, Ferguson & Lanning
157 East Rosemary Street
Chapel Hill, North Carolina 27514

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REPLY BRIEF FOR PETITIONER

Because the opening briefs of the parties and amici have been lengthy, we confine this reply brief to short compass.[2] As respondent notes (N. C. Br. 8-9),[3]

1/ The briefs will hereinafter be cited as follows:

Brief for Petitioner is cited as Pet. Br. __.
Brief for Respondent North Carolina is cited as N.C. Br. ___.
Brief for California as Amicus Curiae is cited as Cal. Br. __.
Brief for Utah as Amicus Curiae is cited as Ut. Br.__.
Brief for the United States as Amicus Curiae is cited as U.S. Br. ___.

2/ Even in a case whose subject matter was less important than life and death, we would think it ill-fitting to rise to points of personal privilege in connection with the implications of the portions of N.C. Br. 18-22 titled "correction of erroneous statements in Petitioners [sic] Brief." We know that the Court will have carefully read both the "erroneous statements" and the "correction[s]" of them, and we rest secure in the Court's judgment as to where the errors lie.

3/ See also U.S. Br. 2.

our Eighth Amendment argument in this Court has two aspects.[4] We consider separately the responses made to each.

First, however, we acknowledge a point that is common to both aspects of our argument and is quite properly the mainstay of all the responding briefs. (See N.C. Br. 24-30, 39-40, 42-46, 49; Cal. Br. 9-13, 22-23; Ut. Br. 16; U.S. Br. 5-6, 8-11, 23-24, 29-32, 46-55, 77.) This is the point that a large measure of deference is due by the Judiciary to legislative choice and to the autonomy of the States in fixing punishments for crime. No one disputes it. Certainly we do not. The question of the proper scope of judicial deference was a critical issue in Furman, and it is a critical issue here.

4/ North Carolina's "Query" (N.C. Br. 8, n.4) as to whether the Petition for Certiorari properly raises that aspect of our argument which is based upon Furman v. Georgia, 408 U.S. 238 (1972), is an insubstantial query. The Question Presented in the Petition for Certiorari is: "Whether the imposition and carrying out of the sentence of death for the crime of murder under the law of North Carolina violates the Eighth or Fourteenth Amendment to the Constitution of the United States?" Petition for Writ of Certiorari to the Supreme Court of North Carolina, Fowler v. North Carolina, No. 73-7031 (filed July 9, 1974) at 2. It was modeled on the question framed in Furman: "'Does the imposition and carrying out of the death penalty in [these cases] constitute cruel and unusual punishment in violation of the Eighth and Fourteenth Amendments?'" 408 U.S. at 239, except that it makes explicit reference to the "law of North Carolina" upon which we rely in the Furman aspect of our argument. See Pet. Br. 45-101. The Supreme Court of North Carolina experienced no difficulty in identifying the two-phased nature of our Eighth Amendment contention; it rejected both phases together after describing them as follows: "Defendant . . . contends that the death penalty in this case is cruel and unusual punishment prohibited by the Eighth and Fourteenth Amendments [and by] . . . the Constitution of North Carolina. He further contends that capital punishment in North Carolina is still imposed in a selective and arbitrary manner, in violation of Furman v. Georgia . . . ." (A. 103). See also Grouping of Exceptions and Assignments of Error in the North Carolina Supreme Court, A. 88.

But the necessity for deference creates -- it does not resolve away -- the "ordeal of judgment"[5] that lies at the heart of the institution of judicial review under the Constitution. Time and again this Court is required to make excruciatingly difficult constitutional decisions "bearing in mind both the broad scope of legislative discretion and the ultimate responsibility of constitutional adjudication."[6] "Inevitably, then, there will be occasions when [the Court] . . . will differ with Congress or state legislatures with respect to the validity of punishment."[7] To talk about judicial deference as though it were an answer -- indeed, the only legitimate answer -- on each of these occasions both oversimplifies the judicial role and disregards its inherent difficulty.

We have tried not to understate that difficulty. See Pet. Br. 103-106. The legislative determinations of "at least 31 states and the United States since Furman"[8] (U.S. Br. 77)

5/ Trop v. Dulles, 356 U.S. 86, 104 (1958)(plurality opinion of Chief Justice Warren).

6/ Ibid.

7/ Furman v. Georgia, supra, 408 U.S. at 314 (concurring opinion of Mr. Justice White).

8/ Since the filing of petitioner's opening brief, the State of Virginia has enacted a death penalty statute which applies to three kinds of murder. This statute is summarized in Appendix A, infra.

are assuredly entitled to respect in the process of decision of this case, although we agree with the Government that "[i]t also [is] . . . helpful to determine the reason why society [has] . . . not rid itself of the apparently aberrant punishment without the need for judicial intervention" (U.S. Br. 8). The latter inquiry is undertaken at Pet. Br. 131-140.[9] We have not suggested that the question of the appropriate scope of judicial review here can be resolved simply by pointing to Article III of the Constitution, any more than by pointing to its Preamble (N.C. Br. 25-27) or to the "proposition that the federal government is one of limited powers" (N. C. Br. 44). If, in the exercise of one of those limited powers -- the power of the federal Judiciary to test the federal constitutionality of a State's judgment to take the life of a citizen -- this Court concludes that "the legislative judgment on these matters should

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9/ Those pages are concerned with the difference between the function of a legislature to respond politically to indicators of public conscience and the function of the courts to rationally interpret indicators of public conscience. See Appendix B, infra, at 8b-13b. They thus respond to the question posed by the Government (U.S. Br. 31) whether invalidation of the death penalty would not require this Court to conclude that the legislatures of thirty-one States and Congress were unresponsive to the standards of decency of their electorates.

be accepted by the judicial arm" (U.S. Br. 11),[10] we do not pretend that that decision will entirely prostrate Article III. Nor will a contrary decision by the Court -- disagreeing with legislative judgment as to the constitutional permissibility of a particular form of punishment -- entirely prostrate the power of the States to "insure domestic tranquility" under the Preamble (N. C. Br. 25),[11] or substitute "an anomalous referendum among judges as a proxy for the 'true' will of the electorate" (U.S. Br. 47). Questions of the scope of judicial review are always matters of degree, not poster-color slogans. That is why we have tried, at Pet. Br. 106-121, to articulate the specific considerations which support the specific standard of review of the death penalty that we have asked the Court to make under the Eighth Amendment.

10/ The full sentence in the Government's brief (U.S. Br. 10-11) is: "Although there may be legitimate differences of opinion regarding capital punishment's acceptance by modern society, its value as a deterrent, and society's need for it to reinforce social values and incapacitate dangerous offenders, those differences of opinion are to be resolved by the legislature; and the legislative judgment on these matters should be accepted by the judicial arm." Of course this is true insofar as opinions on the three questions stated by the Government are relevant to the question of the wisdom of capital punishment, but it is not true insofar as opinions on the same three questions enter into the judgment of constitutionality. Legislative judgment on matters of policy is indisputably conclusive; legislative judgment on constitutional issues, while entitled to respect, cannot conceivably be "accepted" as conclusive by the judiciary; and formulations which confuse the two judgments simply because both involve attention to some of the same ingredients do little to enlighten the process of constitutional decision-making.

11/ Cf. the Government's quotation from Goodhart (U.S. Br. 42): "'A community which is too ready to forgive the wrongdoer may end by condoning crime.'" Presumably the form of condonation implied here is a conviction of murder followed by a sentence of life imprisonment. The equation of a restriction upon the power to punish capitally with a restriction upon the power to protect society by the choice of effective punishments begs a major question in this case.

Among matters of degree, however, there are larger and smaller differences. Two large differences are central to this case. First, death as a punishment is different than any lesser punishment (see Pet. Br. 107-120; BLACK, CAPITAL PUNISHMENT: THE INEVITABILITY OF CAPRICE AND MISTAKE 29-36 (1974)); and arguments that treat the killing of a human being as fungible with other state experiments in the science of penology (see, e.g., U.S. Br. 43), or suggest that Eighth Amendment restraints upon the one are "equally" applicable to the others (U.S. Br. 57), defy reality as much as they ignore authority. See Furman v. Georgia, supra. Second, while the scope of Eighth Amendment review that we urge here -- turning as it does upon the unique character of the penalty of death -- leaves legislatures virtually unimpeded in the fashioning of punishments for crime as they see fit, the scope of review urged by the respondent and its supporting amici leaves the Eighth Amendment virtually unenforceable.[12/] The Government candidly admits as

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12/ E.g., U.S. Br. 8-9: "When a penalty is enacted by a legislature and imposed only by a unanimous jury, the sanction is very unlikely to be outside the bounds of social tolerance. . . . Were this Court to hold the death penalty unconstitutional, it would have to conclude that it -- whose justices are not elected and have been given life tenure in order to insulate them from popular and political opinion -- is more conscious of and more responsive to the will of the people than are the representatives directly elected by and responsible to those people . . . . But if the people are to give their verdict of what is cruel and unusual, the people -- through their elected representatives and through juries -- must sit in judgment." See also U.S. Br. 29: "Thus, if a penalty can pass the dual tests of enactment by the people's representatives and application by the people themselves sitting as a jury, it is almost certainly not so cruel, disproportionate, or repulsive to the sensibilities of modern society that it is forbidden by the cruel and unusual punishments clause."

much when it opines that "desuetude . . . was probably the proper 'fate' of the amendment in light of its history" (U.S. Br. 23-24).[13/] It is not obvious how the Government squares this requiem for the Eighth Amendment with Robinson v. California, 370 U.S. 660 (1962),[14/] let alone with Furman. In a companion case to Furman, the petitioner's brief suggested that judicial review of certain forms of legislation under the Cruel and Unusual Punishments Clause is neither an atavistic nor a dispensable safeguard in the American structure of democratic, majoritarian government. We append that discussion,[15/] which is fully applicable to post-Furman death penalty legislation for the reasons set forth at Pet. Br. 131-133.

13/ Desuetude would certainly be the fate of the Amendment if this Court's prior Eighth Amendment decisions were limited according to the Government's explanation of them (with the notable omission of Furman) at U.S. Br. 24-27 -- each decision painted into an isolated and disjointed corner, so that no coherent or intelligible principles of Eighth Amendment jurisprudence survive.

14/ The Government's discussion of Robinson (U.S. Br. 26-27) fails to explain why, under its theory of the Eighth Amendment, a legislative judgment to treat particular conduct as criminal is entitled to less judicial deference than a legislative judgment regarding the particular punishment to be imposed for criminal conduct.

15/ Pages 13-27 of the Brief for Petitioner in Aikens v. California, 406 U.S. 813 (1972) [No. 68-5027], are attached as Appendix B, infra.

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1. The Perpetuation of Arbitrary Selectivity Under North Carolina's "Mandatory" Capital Punishment Procedures.

Respondent does not controvert our description of North Carolina practice in "capital" cases (Pet. Br. 45-100)[16] and of the numerous uncontrolled selective processes that cumulatively choose some men to actually die from among the larger number who are capitally punishable under North Carolina's broad range of capital offenses.[17] (N.C. Br. 13, 33-39). Rather, these processes are defended on the ground that each choice is made "in good faith, upon oath, according to the law and evidence" (N.C. Br. 37). We question no one's good faith. But good faith is obviously not sufficient to avoid irregularity and

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16/ Respondent does emphasize (N.C. Br. 36-37), as we have previously noted (Pet. Br. 63 and id. n.97, 77-78 and id. n.118) that North Carclina trial judges are not required to submit evidentially unsupported lessers to a jury, and have been admonished by the North Carolina Supreme Court not to do so. Respondent fails to note that trial judges nevertheless do do so in some cases, and that the North Carolina Supreme Court has uniformly held that there is no remedy for, or sanction against, the practice. See Pet. Br. 77-79.

17/ See Pet. Br. 18-23. At Pet. Br. 23 n.25, we noted the enactment of a new North Carolina death penalty statute on April 8, 1974. However, the North Carolina Supreme Court has since held that the 1974 statute is nowise retrospective and has no effect upon death penalties imposed under Waddell prior to its enactment. State v. Williams, 286 N.C. 422, __ S.E.2d __ (1975). Accord: State v. Avery, 286 N.C. 459, __S.E.2d __ (1975); State v. Lampkins, 286 N.C. 497, __S.E.2d __ (1975).

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arbitrariness when innumerable separate prosecutors, judges, jurors and Governors make innumerable life-or-death decisions the least discretionary of which are defined by vague formulations such as "malice," and "premeditation."[18] The behavior of juries alone -- the most visible and legally constrained decision-makers in the entire process -- plainly exhibits choices to convict alternatively of first degree murder, second degree murder or manslaughter that are inexplicable except as exercises of discretion (see Pet. Br. App. C), no "different in kind [or in] . . . degree, from the discretion"[19] condemned in Furman (N.C. Br. 38)(emphasis in original).

18/ Cf. Baggett v. Bullitt, 377 U.S. 360, 373 (1964):"[w]ell-intentioned prosecutors and judicial safeguards do not neutralize the vice of a vague law."

19/ Moreover, recent criminal procedure amendments, effective July 1, 1975, have endorsed the rule of State v. Britt, 285 N.C. 256, 204 S.E.2d 817 (1974)(described at Pet. Br. 89-94) and insure that the jury will continue to be able to nullify the death penalty in a sympathetic case, since North Carolina now has provided a statutory right of a capital defendant to have his jury instructed as to the consequences of a guilty verdict:

> [N.C.Gen. Stat. §15-176.3 (cum. supp.):]
> "Informing and questioning potential jurors on consequences of guilty verdict.- When a jury is being selected for a case in which the defendant is indicted for a crime for which the penalty is a sentence of death, the court, the defense, or the State may inform any person called to serve as a potential juror that the death penalty will be imposed upon the return of a verdict of guilty of that crime and may inquire of any person called to serve as a potential juror whether that person understands the consequences of a verdict of guilty of that crime."
>
> [N.C. Gen. Stat. §15-176.4 (cum. supp.):]
> "Instruction to jury on consequences of guilty verdict. -When a defendant is indicted for a crime for which the penalty is a sentence of death, the court, upon request by either party, shall instruct the jury that

Taking a somewhat different tack, the Government's brief concedes that an array of broadly discretionary judgments does determine which particular defendants will be sent to death under a purportedly "mandatory" death penalty scheme. (U.S. Br. 55-77.) Indeed, the Government's argument that public acceptance of the death penalty is demonstrated by juries' willingness to "assess guilt with knowledge of the potential penalties" (U.S. Br. 30) explicitly recognizes that capital jurors make discretionary sentencing judgments in deciding whether or not to convict of the capital degree of an offense (see also U.S. Br. 24, 48-49)-- often "under the guise of resolving issues of evidential doubt."[20/] The Government responds to this and other

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19/ cont'd.

> the death penalty will be imposed upon the return of a verdict of guilty of that crime."
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> [N.C. Gen. Stat. §15-176.5 (cum.supp.):]
> "Argument to jury on consequences of guilty verdict.- When a case will be submitted to a jury on a charge for which the penalty is a sentence of death, either party in its argument to the jury may indicate the consequences of a verdict of guilty of that charge."

20/ KALVEN & ZEISEL, THE AMERICAN JURY 427 (1966), quoted at Pet. Br. 133. The Government's summary of Kalven & Zeisel (U.S. Br. 70-71) overlooks the authors' "basic thesis . . . that the jury by and large responds to the discipline of the evidence, and where it does not, it conceals from itself its own response to sentiment, under the guise of resolving issues of evidential doubt." KALVEN & ZEISEL, op. cit., at 427. It also ignores the authors' conclusion that "techniques for locating a hard core of capital cases do not put to rest the concern about evenhanded justice. In the end the task is one of deciding who, among those convicted of capital crimes, is to die. Whatever the differences on which this decision hinges, they remain demeaningly trivial compared to the stakes. The discretionary use of the death penalty requires a decision which no human should be called upon to make." Id. at 448-449. The Kalven-Zeisel thesis is dramatically illustrated by State v. Poole, __N.C.__, 203 S.E.2d 786 (1974) (in which the Supreme Court of North Carolina held that appellant had

aspects of admitted sentencing selectivity in the administration of a "mandatory" death penalty[21/] with two basic arguments.[22/] The first is that criminal justice is unavoidably and ineradicably discretionary (U.S. Br. 11-12, 14, 55-60), and that "[i]f a state properly can prescribe the death penalty for at least some crimes, . . . then it is impossible to turn to the Eighth Amendment as a source of a constitutionally-supported principle that this difference in the penalty imposed requires a difference in the process used" (U.S. Br. 57-58). Because the argument either ignores or summarily overrules Furman without benefit of explanation, we see no cause to pursue it. The Government's

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20/ cont'd.

been convicted and sentenced to death for first degree burglary on the basis of insufficient evidence) and by the retrial which followed State v. Spicer, __N.C.__, 204 S.E.2d 641 (1974), in which a defendant whose conviction and death sentence for first degree murder had been reversed by the Supreme Court of North Carolina on the grounds of procedural error was subsequently acquitted of a charge of first degree murder and set free at a retrial. State v. Spicer, New Hanover County Sup. Ct. No. 73-Cr-8034 (Feb. 21, 1975).

21/ See, e.g., U.S. Br. 75-76: "Those whose execution is not averted by one of the avenues of discretionary mercy or constitutional safeguard have been sent to their death because none of a large number of actors thought they deserved to be spared."

22/ A third recurrent argument in the Government's brief -- that "discretion . . . in the criminal justice system . . . reduces the potential punishment a defendant may suffer; it never operates to increase the maximum punishment" (U.S. Br. 66; see also U.S. Br. 13) -- requires no reply beyond Professor Black's quoted at Pet. Br. 76-77 n.116. And compare U.S. Br. 74-75 with Pet. Br. 100.

second argument is that, although discretionary, the manifold selective procedures that determine life or death serve "important goals of criminal justice" (U.S. Br. 63), operate fairly and evenhandedly in most cases (e.g., U.S. Br. 70-73), and are subject to legal or constitutional correction independent of the Eighth Amendment when they do not (e.g., U.S. Br. 12-13, 56-59, 64, 67). It is presumably upon this view that the Government can assume the capital trial process works to visit death "on the worst offenders" (U.S. Br. 39), "a few extreme cases" (U.S. Br. 50), or at least "a few 'exemplary' cases" (ibid.) chosen non-arbitrarily (see U.S. Br. 62). Such assumptions are possible only because the argument is made at a level of theoretical abstraction that declines to "specifically address the North Carolina approach . . . or any particular alternative approach" (U.S. Br. 2; see also id. at 6). Tested by the facts of any particular capital punishment procedure, the Government's theoretical defense of a discretion-laden death-punishing procedure theoretically subject to "independent remedies" (U.S. Br. 64) against aberrational and arbitrary condemnation falls apart.

The most evident such fact in this case, of course, is petitioner Jesse Thurman Fowler's death sentence for a crime that is altogether indistinguishable from hundreds which result in non-capital manslaughter or second degree murder convictions. The Government is manifestly not disposed to support this result, but suggests no way in which the result or similarly arbitrary results can be controlled without reliance on the

Eighth Amendment. The pious pronouncement that "racial or other invidious discrimination occurring . . . at [various] . . . stages of the criminal justice system, is unconstitutional and may be challenged directly" (U.S. Br. 12-13) is simply chimerical in this context.[23/] For the vice which the Government treats as merely adventitious to the administration of a system of capital punishment is in fact endemic to it (see BLACK, CAPITAL PUNISHMENT: THE INEVITABILITY OF CAPRICE AND MISTAKE (1974), passim; Pet. Br. 136-140; U.S. Br. 55-77).

23/ The ineluctable arbitrariness of any system in which men are consigned to die "because none of a large number of actors thought they deserved to be spared" (U.S. Br. 76) can obviously not be controlled by application of the Equal Protection Clause. Both the Government (U.S. Br. 45) and North Carolina (N.C. Br. 47) are quick to call the Court's attention to the particularly ugly crimes involved in a case such as Jarrette v. North Carolina, pending on petition for certiorari, No. 73-6877. However, experienced corrections officials have repeatedly pointed out "that I can take you into San Quentin Prison or to Sing Sing, Leavenworth or Atlanta prisons and I can pick out many prisoners in each institution serving life sentences or less, can prove that their crimes were just as atrocious and sometimes more so, than most of those men on the row." Testimony of Clinton T. Duffy, in Hearings Before the Subcommittee on Criminal Laws and Procedures of the Senate Committee on the Judiciary, 90th Cong., 2d Sess., on S. 1760, To Abolish the Death Penalty 19,24 (March 20, 21 and July 2, 1968). See also Pet. Br. 43 n.64. At the other end of the spectrum, there are cases, such as the killing of her long-time paramour by the 52 year old black woman in Ward v. North Carolina, pending on petition for certiorari, No. 74-6263, which it is perfectly obvious -- although we know no way to demonstrate it statistically -- almost never result in capital verdicts (although this one did). Petitioner Fowler's case is doubtless one in which many prosecutors or juries would conclude that the defendant "deserved to be spared" (U.S. Br. 76), see Pet. Br., App.C; but petitioner's prosecutor and jury did not take that view. His death sentence is the arbitrary result of an arbitrary system that is so irregular as to defy control under Equal Protection principles for lack of any pattern from which deviations may be judged.

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> " . . . [T]he [death] penalty . . . is not and cannot be administered with even rough equality . . . .
>
> A rigid legislative definition of the cases where the sentence should be death has proved to be unworkable in practice, given the infinite variety of circumstances that attend even the heinous crimes. Therefore, it is inevitable that the jury or the court be given power to decide whether the punishment should be imposed . . . . Discretion means, however, that variations are inevitable, depending on the individuals involved, the jury that may be empanelled, the attitude of the press and public and other accidents of time and place . . . . Yet most dramatically when life is at stake, equality is urged to be a most important element of justice." 24/

This uncontrollable inequality -- this sheer arbitrariness -- brings the uniquely harsh penalty of death within the central concerns of the Eighth Amendment (see Pet. Br. 27-45), as Furman held. For surely it is the very essence of a cruel and unusual punishment that such "social tolerance" (U.S. Br. 8) as it enjoys can be purchased only by infrequent, unequal and irregular applications. See Appendix B, infra, at 8b-15b.

24/ Professor Herbert Wechsler, in Symposium on Capital Punishment, 7 N.Y.L.F. 249, 259 (1961).

2. The Excessive Cruelty of the Death Penalty.

The principal argument advanced by the respondent and its supporting amici against this aspect of our Eighth Amendment contention (Pet. Br. 102-140) is that legislative enactment of death penalty laws demonstrates the acceptability of killing as a punishment under contemporary standards of decency. See, e.g., N.C. Br. 28-29; Cal Br. 36; U.S. Br. 29-31. We anticipated the argument at Pet. Br. 131-140, and will not impose upon the Court by further elaboration of the distinction recognized in Furman between (A) legislative acceptance of a punishment as a regular and usual part of the state's criminal-law machinery and (B) legislative authorization of a punishment to be inflicted in the rare and uncertain cases where it "is not averted by one of [numerous recognized] . . . avenues of discretionary mercy" provided by procedures under which particular defendants "have been sent to their death because none of a large number of actors thought they deserved to be spared" (U.S. Br. 76).

The Government (U.S. Br. 30) and California (Cal. Br. 39) also point to the fact that juries are willing to vote to kill defendants in individual cases, whereas a truly intolerable punishment would be rejected "by the refusal of juries to convict of crimes carrying the . . . punishment" (U.S. Br. 24). However, there would be no purpose to a constitutional guarantee forbidding only Cruel and Unusual Punishments which no jury

will permit to be imposed upon any defendant; and the argument that sometimes capital crimes are prosecuted to a death verdict (and, more rarely, to an execution) ignores the far more striking fact that this outcome is uniformly rejected except for a "bare sample of the ["literally thousands"] of culprits whose conduct makes them eligible for [it]."[25/]

> "The most salient characteristic of capital punishment is that it is infrequently applied. . . . [A]ll available data indicate that judges, juries and governors are becoming increasingly reluctant to impose or authorize the carrying out of a death sentence." [26/]

Such infrequency and reluctance make "aberrational" (U.S. Br. 24) the cases in which juries are willing to see the defendant suffer death.[27/] And an extreme penalty that is repudiated save

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25/ Professor Herbert Wechsler, quoted at Pet. Br. 134. It should be noted that Professor Wechsler is speaking in 1961 of the death penalty at a time (1930-1959) when it was used far more frequently ("with executions ranging from 199 to 48," ibid.) than it has been used in later years.

26/ PRESIDENT'S COMMISSION ON LAW ENFORCEMENT AND ADMINISTRATION OF JUSTICE, REPORT: THE CHALLENGE OF CRIME IN A FREE SOCIETY 143 (G.P.O. 1967).

27/ The Government suggests that punishments imposed by "administrative officals" are peculiarly subject to Eighth Amendment review because "[t]he smaller the decision-making body, the more likely it is to err in its reading of the demands of the social mores and the less likely the penalty will be brought to public attention for correction" (U.S. 28). The Government does not apply this analysis, however, to the verdicts of particular juries which vote to impose a death sentence in cases where other juries would not (see Pet. Br., App. C), or to a system of administering the death penalty in which its infliction rests upon such verdicts.

in aberrational cases is the very definition of a cruel and unusual punishment.

For the rest, the responding briefs repeat the several justifications which have unvaryingly been advanced to support the death penalty and were previously advanced to sustain live disembowelment and other torturous means of inflicting death. The "moral reinforcement" argument -- whether cast in terms of an "expression of moral outrage" (U.S. Br. 39) or "'public rituals'" (U.S. Br. 40) -- persists with a characteristic lack of explanation in treating criminal convictions followed by severe punishments like life imprisonment as tending to "'forgive the wrongdoer [so as to] . . . end by condoning the crime'" (U.S. Br. 42).[28/] See Cal. Br. 24-25; U.S. Br. 39-44. The "incapacitation" argument characteristically jumps from an assertion of the homicidal dangerousness of "certain offenders" (U.S. Br. 45) to the assertion that "[t]hese individuals can

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28/ Cf. Lord Chancellor Gardiner, in 268 HANSARD, PARLIAMENTARY DEBATES (5th series) 703 (Lords, 43rd Parl., 1st Sess., 1964-1965) (1965): "When we abolished the punishment for treason that you should be hanged, and then cut down while still alive, and then disembowelled while still alive, and then quartered, we did not abolish that punishment because we sympathised with traitors, but because we took the view that it was a punishment no longer consistent with our self-respect."

be detected" (ibid.), without mention of the fact that neither North Carolina law nor any other extant American death penalty law undertakes to detect them, even if they were detectable.[29] See Cal. Br. 28-29; U.S. Br. 44-46. The "deterrence" argument characteristically invokes the common intuition of the persons making the argument and those to whom it is addressed that we would be deterred from crime by the threat of death, as though we were the sorts of persons who would commit violent crimes if not deterred from doing so by fears of execution. See Cal. Br. 29-31; U.S. Br. 32-35. Evidence of the deterrent efficacy of the death penalty is found in the "dramatic increases in murders" (Cal. Br. 26) during the past decade (see N.C. Br. 41 n.55; Cal. Br. 26-27), without mention of the fact that murder has shown by far the lowest rate of increase of all major crimes during this period[30] -- a fact hardly conducive of the conclusion

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29/ For a detailed discussion of this problem, see Furman v. Georgia, 408 U.S. 238, 356-357 (1972)(concurring opinion of Mr. Justice Marshall).

30/ The 1973 Uniform Crime Reports -- the latest that we have found available -- show the following percent changes from 1960 to 1973 in (A) number of offenses, and (B) rate per 100,000 inhabitants, for the seven major crimes:

	(A) Percent increase in number of offenses	(B) Percent increase in rate per 100,000 inhabitants
Murder and non-negligent manslaughter	115.6	86.0
Forcible rape	199.2	155.8
Robbery	256.3	204.5
Aggravated Assault	172.6	132.9
Burglary	181.3	140.3
Larceny	134.3	100.3
Auto theft	183.0	141.8

UNITED STATES DEPARTMENT OF JUSTICE, FEDERAL BUREAU OF INVESTIGATION, UNIFORM CRIME REPORTS: CRIME IN THE UNITED STATES - 1973, table 2 (Sept. 6, 1974) at 59.

that the rate of crimes supposed to be deterred by capital punishment has risen disproportionately to other crimes as "the annual number of executions in the United States dwindled to nothing" (Cal. Br. 26). The Government's "sophisticated regression analysis" (U.S. Br. 9), once it has been analyzed, turns out to contain the same simple error, among numerous others.[31] With the utmost deference, we find nothing in the justifications offered for the death penalty by respondent or its supporting amici that warrant our expanding upon our previous discussion of the subject at Pet. Br. 121-130 and App. E at 1e-10e.

31/ Because the Government has lodged with the Court an unpublished manuscript entitled "The Deterrent Effect of Capital Punishment: A Question of Life or Death" (National Bureau of Economic Research Working Paper No. 18, November 1973) written by Isaac Ehrlich, and because the recondite form of that paper entails the danger that its unintelligibility will obscure its insignificance, we attach a brief analysis of it as Appendix C, infra. See also Appendix E. We find it particularly surprising that the Government sees the value of the paper in its supposed attempt to "hold constant factors other than the death penalty that might influence the rate of murders" (U.S. Br. 37; see also id. at 38), since Ehrlich has (A) chosen a method of mathematical analysis that is peculiarly sensitive to the effect of omitting critical variables, and (B) proceeded to omit numerous critical variables (including one that his own earlier work concluded was critical, see Appendix C, infra at 12-13c) while seizing upon only those variables which work to convert an initial finding of positive correlation between "the reported murder rate and estimates of the objective risk of execution given conviction of murder" (Ehrlich manuscript, supra, at 32) into a negative correlation. For present purposes, however, it is sufficient to note that Ehrlich's ultimate negative correlation (even if one ignores all of the other defects of his methodology) depends exclusively upon the effect of the period of the 1960's; and that he singularly fails to control for factors that produced a general rise in the crime rate -- a rise that is higher than the rise in the capital crime rate, see note 27 supra -- during this latter period.

Respectfully submitted,

JACK GREENBERG
JAMES M. NABRIT, III
DAVID E. KENDALL
PEGGY C. DAVIS
10 Columbus Circle
New York, New York 10019

ANTHONY G. AMSTERDAM
Stanford University Law School
Stanford, California 94305

ADAM STEIN
CHARLES L. BECTON
Chambers, Stein, Ferguson & Lanning
157 East Rosemary Street
Chapel Hill, North Carolina 27514

Attorneys for Petitioner

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APPENDIX A

Capital Punishment Statutes Enacted

Since Furman v. Georgia

VIRGINIA

Virginia provides the death penalty for some cases of "capital murder." "Capital murder" is defined and classified as a "class 1 felony" by Va. Code §18.2-31 (1975 Virginia Laws, c. 14 (Feb. 14, 1975)):

> "(a) the wilful, deliberate and premeditated killing of any person in the commission of abduction, as defined in §18.2-48 [1/], when such abduction was committed with the intent to extort money, or a pecuniary benefit;
>
> (b) the wilful, deliberate and premeditated killing of a human being by another for hire; and
>
> (c) the wilful, deliberate and premeditated killing by an inmate in a penal institution as defined in §53-19.18 [2/], or while in the custody of an employee thereof."

Virginia Code §18.2-10 (1975 Virginia Laws, c. 14 (Feb. 14, 1975)) provides that the authorized punishment for conviction of a class 1 felony is death. No new capital procedure is provided.

No standards are provided to govern prosecutorial discretion in seeking and filing capital charges. Convictions of lesser included offenses and negotiated pleas to lesser included offenses are not prohibited in capital cases. The Governor's clemency power in capital cases is left unaltered.

These statutes become effective on October 1, 1975.

1/ Virginia Code §18.2-48 (1975 Virginia Laws, c. 14 (Feb. 14, 1975)) provides:

> "Abduction with intent to extort money or for immoral purpose.— Abduction with the intent to extort money, or pecuniary benefit, abduction of any person with intent to defile such person, and abduction of any female under sixteen years of age for the purpose of concubinage or prostitution, shall be a class 2 felony."

Virginia Code §18.2-47 (1975 Virginia Laws, c. 14 (Feb. 14, 1975)) provides:

> "Abduction and kidnapping; defined and punishment.— Any person, who, by force, intimidation or deception, and without legal justification or excuse, seizes, takes, transports, detains or secretes the person of another, with the intent to deprive such other person of his personal liberty, or to withhold or conceal him from any person, authority or institution lawfully entitled to his charge, shall be deemed guilty of 'abduction'; but the provisions of this section shall not apply to any law enforcement officer in the performance of his duty. The terms 'abduction' and 'kidnapping' shall be synonymous in this Code."

2/ Virginia Code §53-19.18 (1974) defines "penal institution" as "every prison, prison camp, prison farm or correctional field unit . . . and every jail, jail farm, lockup or other place of detention . . . [but not including] any industrial school or other institution established solely for the detention of juvenile delinquents."

APPENDIX B

Brief for Petitioner,

Aikens v. California, 406 U.S. 813 (1972)

[No. 68-5027] at 13-27.

whether death is a cruel and unusual punishment within the meaning of the Constitution of a Nation which aspires to be one of the world's more enlightened peoples.

But our approach to the Eighth Amendment concentrates primarily upon the evolution of the death penalty in the United States itself. Properly viewed, that evolution has brought this country to a stage at which the relevant constitutional indicators of a cruel and unusual punishment have abundantly matured. America has had its time of "experimentation"[23] with the killing of men; the experiment has led to one inexorable conclusion; and further development can only make more manifest—at a terrible cost—what is already manifest and manifestly fitting as a basis for judicial application of the Constitution. To demonstrate why this is so, we first discuss the nature of the Eighth Amendment's concern against cruel and unusual punishments, and then proceed to test the death penalty in light of that concern.

II. THE RELEVANT EIGHTH AMENDMENT STANDARD

At the heart of the Eighth Amendment[24] lurks an extraordinary dilemma whose resolution is, we think, the key to decision of this case. The dilemma arises from the confrontation of three basic principles.

Iran, Mali, Mexico (29 of whose 32 jurisdictions have legally abolished the death penalty), Nicaragua, Pakistan, Sierra Leone, Sudan and the Republic of Viet Nam. These latter countries would therefore have to account for more than a quarter of the executions in the non-communist world in order to bring the non-communist total, exclusive of the United States, to 660 according to Patrick's figures. And Patrick's figures appear to be unduly high. See note 51, *infra*.

[23] See *Powell v. Texas*, 392 U.S. 514, 536-537 (1968) (plurality opinion of Mr. Justice Marshall); *Williams v. Florida*, 399 U.S. 78, 138 (1970) (separate opinion of Mr. Justice Harlan).

[24] The Cruel and Unusual Punishment Clause of the Eighth Amendment is made applicable to the States through the Due Process Clause of the Fourteenth. *Robinson v. California*, 370 U.S. 660 (1962), so holds; and there can be little doubt that this Bill of Rights guarantee,

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First, in the context of American government, the Eighth Amendment's proscription of cruel and unusual punishments forbids the legislative enactment of such punishments as well as the judicial imposition of them. This has always been accepted. *Weems v. United States*, 217 U.S. 349, 366, 378-379, 382 (1910); *Trop v. Dulles*, 356 U.S. 86, 103-104 (1958) (plurality opinion of Chief Justice Warren); *Robinson v. California*, 370 U.S. 660 (1962); and see *Wilkerson v. Utah*, 99 U.S. 130, 133, 136-137 (1879) (dictum); *In re Kemmler*, 136 U.S. 436, 446-447 (1890) (dictum).

Second, the force of the Amendment is not limited to the prohibition of those atrocities that would have turned the stomachs of the Framers in the Eighteenth Century.[25]

whose "basic concept . . . is nothing less than the dignity of man," *Trop v. Dulles*, 356 U.S. 86, 100 (1958) (plurality opinion of Chief Justice Warren), satisfies the most restrictive test for adoption as a measure of due process. Its derivation from times anterior to Magna Carta (see Granucci, *"Nor Cruel and Unusual Punishments Inflicted:" The Original Meaning*, 57 CALIF. L. REV. 839, 845-846 (1969)) through the Bill of Rights of 1689 (1 Wm. & Mary, sess. 2, ch. 2, preamble, clause 10) amply establishes that it is a " 'principle of justice so rooted in the traditions and conscience of our people as to be ranked as fundamental.' " *Palko v. Connecticut*, 302 U.S. 319; 325 (1937). The point did not escape Patrick Henry in 1788. "What has distinguished our ancestors?–That they would not admit of tortures, or cruel and barbarous punishment." 3 ELLIOT, DEBATES IN THE SEVERAL STATE CONVENTIONS ON THE ADOPTION OF THE FEDERAL CONSTITUTION (1863), 447.

For convenience, we shall speak simply of the Eighth Amendment throughout this brief, meaning thereby the Cruel and Unusual Punishment Clause as it measures the liberty protected by the Due Process Clause of the Fourteenth Amendment.

[25]Certainly the Eighth Amendment does bar those atrocities, but they mark only the core of minimum content of its prohibition. This is what was meant in *Wilkerson v. Utah*, 99 U.S. 130, 136 (1879), by the observation that, although the exact extent of the Cruel and Unusual Punishment Clause is difficult of definition, "it is safe to affirm that punishments of torture . . . , and all others in the same line of unnecessary cruelty, are forbidden." *Wilkerson* does not suggest, as the *Weems* dissent seems to imply, that torture is the outer limit of the Amendment. *Weems v. United States*, 217 U.S. 349, 400-401

This conclusion is compelled by both authority and reason. "[I]t is a constitution we are expounding,"[26] and the Constitution "states or ought to state not rules for the passing hour, but principles for an expanding future."[27] Thus, *Trop v. Dulles*, 356 U.S. 86 (1958), outlawed the hoary penalty of banishment with the observations that the scope of the Cruel and Unusual Punishment Clause "is not static," and that the "Amendment must draw its meaning from the evolving standards of decency that mark the progress of a maturing society." (*Id.*, at 101 (plurality opinion of Chief Justice Warren).) See also *Robinson v. California*, 370 U.S. 660, 666 (1962) (referring to "the light of contemporary human knowledge"); *Jackson v. Bishop*, 404 F.2d 571, 578-580 (8th Cir. 1968); *Goss v. Bomar*, 337 F.2d 341, 342-343 (6th Cir. 1964) (*dictum*). Such a conception of evolving standards is a constitutional commonplace,[28] and is firmly

(1910) (Mr. Justice White, dissenting). Nor could the Amendment be so limited for the reasons stated convincingly by the majority in *Weems:*

> ". . . [S]urely [the Framers] . . . intended more than to register a fear of the forms of abuse that went out of practice with the Stuarts. Surely, their jealousy of power had a saner justification than that. They were men of action, practical and sagacious, not beset with vain imagining, and it must have come to them that there could be exercises of cruelty by laws other than those which inflicted bodily pain or mutilation. . . . [I]f we are to attribute an intelligent providence to [the Eighth Amendment's] . . . advocates we cannot think that it was intended to prohibit only practices like the Stuarts, or to prevent only an exact repetition of history. We cannot think that the possibility of a coercive cruelty being exercised through other forms of punishment was overlooked." (*Id.* at 372-373.)

[26]*M'Culloch v. Maryland*, 4 Wheat. 316, 407 (1819).

[27]CARDOZO, THE NATURE OF THE JUDICIAL PROCESS (1921), 83

[28]E.g., *Brown v. Board of Education*, 347 U.S. 483, 492-493 (1954) ("In approaching this problem, we cannot turn the clock back to 1868 when the [Fourteenth] Amendment was adopted . . . ."); *Ex parte Wilson*, 114 U.S. 417, 427-428 (1885) ("What punishments shall be considered as infamous [for purposes of the Fifth Amendment's indictment

entrenched in the jurisprudence of the Eighth Amendment in particular. The Cruel and Unusual Punishment Clause

requirement] may be affected by the changes of public opinion from one age to another.") Reference was made to *Wilson* and to *Mackin v. United States*, 117 U.S. 348, 351 (1886), in *Weems v. United States*, 217 U.S. 349, 378 (1910), which canvassed the subject in this frequently quoted passage:

> "Legislation, both statutory and constitutional, is enacted, it is true, from an experience of evils, but its general language should not, therefore, be necessarily confined to the form that evil had theretofore taken. Time works changes, brings into existence new conditions and purposes. Therefore a principle to be vital must be capable of wider application than the mischief which gave it birth. This is peculiarly true of constitutions. They are not ephemeral enactments, designed to meet passing occasions. They are, to use the words of Chief Justice Marshall, 'designed to approach immortality as nearly as human institutions can approach it.' The future is their care and provision for events of good and bad tendencies of which no prophecy can be made. In the application of a constitution, therefore, our contemplation cannot be only of what has been but of what may be. Under any other rule a constitution would indeed be as easy of application as it would be deficient in efficacy and power. Its general principles would have little value and be converted by precedent into impotent and lifeless formulas. Rights declared in words might be lost in reality. And this has been recognized. The meaning and vitality of the Constitution have developed against narrow and restrictive construction. There is an example of this in *Cummings v. State of Missouri*, 4 Wall. 277, where the prohibition against *ex post facto* laws was given a more extensive application than what a minority of this court thought had been given in *Calder v. Bull*, 3 Dall. 386. See also *Ex parte Garland*, 4 Wall. 333. The construction of the 14th Amendment is also an example, for it is one of the limitations of the Constitution. In a not unthoughtful opinion Mr. Justice Miller expressed great doubt whether that Amendment would ever be held as being directed against any action of a State which did not discriminate 'against the negroes as a class, or on account of their race.' *Slaughterhouse Cases*, 16 Wall. 36, 81. To what extent the Amendment has expanded beyond that limitation need not be instanced.
>
> "There are many illustrations of resistance to narrow constructions of the grants of power to the National Government. One only need be noticed, and we select it because it was made against a power which more than any other is kept present to our minds in visible and effective action. We mean

"may be therefore progressive, and is not fastened to the obsolete but may acquire meaning as public opinion becomes enlightened by a humane justice." *Weems v. United States*, 217 U.S. 349, 378 (1910).

To deny this dynamic character to the Eighth Amendment would produce inconceivable results. Appendix C to this brief sets forth some of the punishments legally in force and commonly in use in this country during the period when the Cruel and Unusual Punishment Clause was written and adopted. If 1791 is indeed the constitutional benchmark and if the Constitution does not forbid capital punishment today upon the theory that it was widely allowed by law and practice in 1791, then the Eighth Amendment also does not forbid today—and will never forbid—the stocks and the pillory, public flogging, lashing and whipping on the bare body,[29] branding of cheeks and forehead with a hot

> the power over interstate commerce. This power was deduced from the eleven simple words, 'to regulate commerce with foreign nations and among the several States.' The judgment which established it was pronounced by Chief Justice Marshall (*Gibbons v. Ogden*), and reversed a judgment of Chancellor Kent, justified, as that celebrated jurist supposed, by a legislative practice of fourteen years and fortified by the opinions of men familiar with the discussions which had attended the adoption of the Constitution. Persuaded by such considerations the learned chancellor confidently decided that the Congressional power related to 'external, not to internal, commerce,' and adjudged that under an act of the State of New York, Livingston and Fulton had the exclusive right of using steamboats upon all of the navigable waters of the State. The strength of the reasoning was not underrated. It was supported, it was said, 'by great names, by names which have all the titles to consideration that virtue, intelligence and office can bestow.' The narrow construction, however, did not prevail, and the propriety of the arguments upon which it was based was questioned. It was said, in effect, that they supported a construction which ' would cripple the government and render it unequal to the objects for which it was declared to be instituted, and to which the powers given, as fairly understood, render it competent' . . . ." (*Id.* at 373-375.)

[29] Whipping was not thought to be a particularly serious punishment in the late eighteenth century. "[B]y the first Judiciary Act of the United States, whipping was classed with moderate fines and short

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iron, and the slitting, cropping, nailing and cutting off of ears. Further discussion of a "static" theory of the Eighth Amendment seems unnecessary.[30]

Third, in applying the Eighth Amendment to advancing and changing times, the courts are to be guided by the touchstone of "contemporary human knowledge,"[31] "public opinion . . . enlightened by a humane justice,"[32] and "the evolving standards of decency that mark the progress of a maturing society."[33] What other standards, after all, could possibly be used? Surely it was not the purpose of the Eighth Amendment that succeeding generations of judges should mirror in it their own, individual philosophies of the criminal sanction. So, if the obsolete and eldritch customs of 1791 are not to be perpetually controlling, where else may judges look but to enlightened public opinion for conception of the "cruel and unusual punishments" which the Constitution forbids?

And there stands the dilemma. Quite perceptibly, an extreme difficulty must attend any process of constitutional adjudication by which this Court subjects legislation to the

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terms of imprisonment in limiting the criminal jurisdiction of the District Courts to cases 'where no other punishment than whipping, not exceeding thirty stripes, a fine not exceeding one hundred dollars, or a term of imprisonment not exceeding six months, is to be inflicted.' Act of September 24, 1789, chap. 20, § 9; 1 Stat. at L., 77." *Ex parte Wilson*, 114 U.S. 417, 427-428 (1885).

[30]The argument has sometimes been advanced that the Eighth Amendment cannot forbid capital punishment consistently with the indictment clause of the Fifth, which speaks of (and, so the argument goes, constitutionalizes) "capital . . . crime." This reasoning, like the static theory of the Eighth Amendment generally, proves too much. For the double jeopardy clause of the constitution also speaks of "jeopardy of life *or limb*." (Emphasis added.)

[31]*Robinson v. California*, 370 U.S. 660, 666 (1962).

[32]*Weems v. United States*, 217 U.S. 349, 378 (1910).

[33]*Trop v. Dulles*, 356 U.S. 86, 100 (1958) (plurality opinion of Chief Justice Warren).

test of "enlightened public opinion," and adjudges the validity of a legislature's product according to society's "standards of decency." For, both in constitutional contemplation and in fact, it is the legislature, not the Court, which responds to public opinion and immediately reflects the society's standards of decency. If the question asked by the Eighth Amendment really be whether our democratic society can tolerate the existence of any particular penal law that is on the books, the Eighth Amendment's answer will always be that it can—and for the simple reason that the law is on the books of a democratic society.[34] The conclusion therefore seems to be required either that the Eighth Amendment is *not* a judicially enforceable restriction upon legislation;[35] or that the *Weems-Trop* test referring to contemporary public standards of decency is not a usable measure of the Amendment; or else that the question which we have just posed is not the proper question to which the Amendment and the *Weems-Trop* test respond.

As this way of putting the matter suggests, we think that the question—whether the maintenance of a particular harsh penalty on the statute books is consistent with prevailing standards of decency—is the wrong question. We suggest what we think is the right one below. For we cannot believe that the Eighth Amendment is not a restriction upon

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[34]Mr. Justice Story therefore wrote that the Eighth Amendment "would seem to be wholly unnecessary in a free government, since it is scarcely possible that any department of such a government should authorize or justify such atrocious conduct" as the Amendment forbids. 2 STORY, COMMENTARIES ON THE CONSTITUTION OF THE UNITED STATES (4th ed. 1873), 623. This observation has undoubted merit with regard to penal laws that are generally and uniformly enforced, but it is inapplicable to selectively and rarely enforced punishments. Precisely in regard to such "cruel *and unusual* punishments," the Amendment is most necessary.

[35]See *State v. Cannon*, 55 Del. 585, 190 A.2d 514 (1963), sustaining the punishment of whipping in an opinion which effectively denies any judicial review of legislation under the Cruel and Unusual Punishment Clause.

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cruel and unusual penal legislation rightly enforceable by this Court. Nor can we believe that the Amendment's prohibition is restricted to live disembowelment and similar long-gone butcheries–nor, on the other hand, that it invokes the unassisted penological impressions of particular Justices. The *Weems-Trop* test *is*, we submit, the proper one. Common standards of decency in our contemporary society *do* set the limits of punishment allowable under the Eighth Amendment. The problem is how those standards are to be ascertained, and with regard to what specific question.

We begin with the specific question. When a man such as Earnest Aikens comes before the Court claiming that the law under which he was sentenced provides for an unconstitutional cruel and unusual punishment, the question is not: will contemporary standards of decency allow the existence of such a general law on the books? The question is, rather: will contemporary standards of decency allow the general application of the law's penalty *in fact*? The distinction which we draw here lies between what public conscience will allow the law to *say* and what it will allow the law to *do*--between what public decency will permit a penal statute to threaten and what it will allow the law to carry out–between what common revulsion will forbid a government to put upon its statute books as the extreme, dire terror of the State (not to be ordinarily, regularly or in other than a few rare cases enforced), and what public revulsion would forbid a government to do to its citizens if the penalty of the law were generally, even-handedly, non-arbitrarily enforced in all of the cases to which it applied.

This last point–regarding general, even-handed, non-arbitrary application is critical. For in it lies, we think, a large part of the need to have a Cruel and Unusual Punishment Clause in the Constitution, and of the need to have courts enforce it. The government envisaged for this country by the Constitution is a democratic one, and in a democracy there is little reason to fear that penal laws will be placed upon the books which, in their general application,

would affront the public conscience. The real danger concerning cruel and inhuman laws is that they will be enacted in a form such that they can be applied sparsely and spottily to unhappy minorities, whose numbers are so few, whose plight so invisible, and whose persons so unpopular, that society can readily bear to see them suffer torments which would not for a moment be accepted as penalties of general application to the populace.[36]

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[36] A recent detailed analysis of the historical origins of the cruel and unusual punishment clause of the Eighth Amendment demonstrates that the provision of the English Bill of Rights of 1689 from which the Eighth Amendment's language was taken *verbatim* was concerned primarily with the irregular, selective application of harsh (but not intrinsically barbaric) punishments; and that its cardinal aim was to forbid the oppressive exercises of a legally unregulated power to mete out severe punishments arbitrarily. Granucci, *"Nor Cruel and Unusual Punishments Inflicted:" The Original Meaning*, 57 CAL. L. REV. 839, 845-847, 852-860 (1969). To be sure, Granucci also finds that the American Framers imperfectly understood the English background of the Cruel and Unusual Punishment Clause, and that they were themselves principally concerned with the problem of intrinsically barbaric penalties. But this does not support a conclusion that the Framers meant to wholly alter the meaning of the guarantee which they found in the English traditions, or to reject protections of the citizen long preserved by their English heritage.

The debates in Congress and in the ratifying conventions concerning the Eighth Amendment are set forth in Appendix D to this brief. Discussion of the Cruel and Unusual Punishment Clause was notably brief; and only one or two of those who voted for it spoke. What they said unquestionably sustains the view that they meant to *include* in the guarantee a proscription of inherently barbarous penalties. It does not sustain the view that they meant to jettison other restrictions upon punishment which were encompassed by the language that they took as embodying the basic rights of the citizen evolved through the course of English history. To the contrary, it is apparent that the principal motive force behind inclusion of the Eighth Amendment in the Constitution was the relatively simple and imprecise notion that its guarantees had always been recognized as restrictions upon English government, and that the new national government established by the Constitution and given considerable powers over individuals could not safely be unleashed from the same safeguards.

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Herein is found the difference between the judgment which the legislator makes, responding *politically* to public conscience, and the judgment which a court must make under the obligation that the Eighth Amendment imposes upon it to respond *rationally* to public conscience. A legislator may not scruple to put a law on the books (still less, to maintain an old law on the books) whose general, even-handed, non-arbitrary application the public would abhor—precisely because both he and the public know that it will not be enforced generally, even-handedly, non-arbitrarily. But a court cannot sustain such a law under the Eighth Amendment. It cannot do so because both the Amendment itself and our most fundamental principles of due process and equal protection forbid American governments the devices of arbitrariness and irregularity, even as a sop to public conscience.

To put the matter another way, there is nothing in the political process by which public opinion manifests itself in legislated laws that protects the isolated individual from being cruelly treated by the state. Public conscience often will support laws enabling him to be so mistreated, provided that arbitrary selection can be made in such a fashion as to keep his numbers small and the horror of his condition mute.[37] Legislators neither must nor do take account of

[37]William Forsyth wrote:

> "... When in respect of any class of offenses the difficulty of obtaining convictions is at all general in England, we may hold it as an axiom, that the law requires amendment. Such conduct in juries is the silent protest of the people against its undue severity. This was strongly exemplified in the case of prosecutions for the forgery of bank-notes, when it was a capital felony. It was in vain that the charge was proved. Juries would not condemn men to the gallows for an offense of which the punishment was out of all proportion to the crime; and as they could not mitigate the sentence they brought in verdicts of Not Guilty. The consequence was, that the law was changed; and when secondary punishments were substituted for the penalty of death, a forger had no better chance of an acquittal than any other criminal. Thus it is that the power which juries possess of refusing to put the law in force has, in the words of Lord John Russell, 'been the

such individuals.[38] But it is the precise business of courts to take account of them, and to disallow under the Eighth Amendment the application to them of penalties so harsh that public conscience would be appalled by their less arbitrary application.[39]

We shall develop this theme more fully, in the pages that follow, with regard to the death penalty. But we have said enough, at this point, to enable us to state our major submission on behalf of Earnest Aikens. His sentence of death for the crime of first-degree murder is an unconstitutional

> cause of amending many bad laws which the judges would have administered with professional bigotry, and above all, it has this important and useful consequence, that laws totally repugnant to the feelings of the community for which they are made, can not long prevail in England.'"

FORSYTH, HISTORY OF TRIAL BY JURY (2d ed. 1878), 367-368. However, as this Court recognized in *McGautha v. California*, 402 U.S. 183 (1971) the American Legislative response to "the problem of jury nullification" in capital cases was to substitute discretionary for mandatory capital sentencing provisions. In this way, laws which might be "totally repugnant to the feelings of the community" as applied to the generality of cases could nevertheless be preserved for sporadic application, free of the pressures of either jury nullification or public pressure on the legislature.

[38]See *Ralph v. Warden*, 4[illegible] F.2d 786, 792 (4th Cir. 1970):

> "Although the legislature has the responsibility of establishing criminal penalties, subject only to constitutional limitations, popular acceptance or rejection of capital punishment is reflected by the incidence of actual executions. When the death penalty for rape is exacted with the infrequency that the statistics disclose, there is little pressure for amendment. Public awareness diminishes as the frequency of imposing the penalty decreases, and legislative action is not likely to be prompted when the consequences befall only a few prisoners. For purposes of ascertaining evolving standards, the retention of the death penalty for rape in the codes of some states is less significant than its steady fall into disuse and the present moratorium on executions."

[39]A somewhat similar analysis leads Goldberg and Dershowitz to the conclusion that "A penalty ... should be considered 'unusually' imposed [in the sense of the Eighth Amendment] if it is administered arbitrarily or discriminatorily." Goldberg & Dershowitz, *Declaring the Death Penalty Unconstitutional*, 83 HARV. L. REV. 1773, 1790 (1970).

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cruel and unusual punishment because it affronts contemporary standards of decency, universally felt, that would condemn the use of death as a penalty for that crime if such a penalty were uniformly, regularly, and even-handedly applied either to all first-degree murderers or to any reasonable proportion of those eligible for the penalty under California law.[40]

We use the term "reasonable proportion" in order to exclude the sort of tolerance which a law may obtain through rare--or, in the constitutional sense, "unusual"[41]--applica-

[40]In saying this, we do not ignore the aggravating features of Earnest Aikens' own case. Those features are immaterial for present purposes, because under California law Aikens' sentence of death need not, and does not, depend upon them. Cases presenting the same or worse features might result in a life sentence; cases presenting strongly mitigating circumstances might draw down a death verdict. It is meaningless to ask how enlightened public opinion would react to any particular case. The relevant Eighth Amendment touchstone is the judgment of enlightened public opinion upon the use of the penalty prescribed for the crime defined by law.

[41]"Whether the word 'unusual' has any qualitative meaning different from 'cruel' is not clear. On the few occasions this Court has had to consider the meaning of the phrase, precise distinctions between cruelty and unusualness do not seem to have been drawn. See *Weems v. United States*, . . . ; *O'Neil v. Vermont*, . . . ; *Wilkerson v. Utah*, ... These cases indicate that the Court simply examines the particular punishment involved in light of the basic prohibition against inhuman treatment, without regard to any subtleties of meaning that might be latent in the word 'unusual.' But cf. *In re Kemmler*, . . . ; *United States ex rel. Milwaukee Social Democratic Publishing Co. v. Burleson*, 255 U.S. 407, 430 (Brandeis, J., dissenting). If the word 'unusual' is to have any meaning apart from the word 'cruel,' however, the meaning should be the ordinary one, signifying something different from that which is generally done." *Trop v. Dulles*, 356 U.S. 86, 100-101 n. 32 (1958) (plurality opinion of Chief Justice Warren). We think that the constitutional word "unusual" does have some meaning, see note 36, *supra*; and that in determining whether a particular punishment is "unusual" or "different from that which is generally done," it is necessary to look to the actual infliction of the punishment, not its mere statutory authorization. See *Ralph v. Warden*, 438 F.2d 786, 792, (4th Cir. 1970), quoted in note 38, *supra*; *O'Neil v. Vermont*, 144

tion. We do so for the reasons which we have just stated: that is, because we believe that the Cruel and Unusual Punishment Clause is designed precisely to condemn any penalty so oppressive that it can command public acceptance only by virtue of extremely infrequent and sporadic enforcement. Laws are written to be enforced with practicable generality in the cases to which they apply; and so it is a fair measure of a law's acceptability to imagine its general enforcement. Let us do so with regard to capital punishment for first-degree murder.

Let us take a very modest standard of generality and assume that the United States were to execute 184 first-degree murderers this year. We have chosen that figure--in the absence of any obtainable information concerning the number of first-degree murder convictions annually[42]--because it represents the largest number of murderers executed in the country since reliable counts began to be kept in 1930. During the year 1935, 184 men and women were put to death for murder in the United States.[43] Of course, it is absurd to suppose that as few first-degree murder convictions are returned yearly in the 1970's as in the 1930's; and

U.S. 323, 337, 338 (1892) (Mr. Justice Field, dissenting). *Cf. Wilkerson v. Utah*, 99 U.S. 130, 135 (1879), which, after recounting Blackstone's enumeration of the methods of execution authorized by English law (*i.e.*, live disembowelment, beheading and quartering), adds: "History confirms the truth of these atrocities, but the commentator states that the humanity of the nation by tacit consent allowed the mitigation of such parts of those judgments as savored of torture or cruelty, and he states that they were seldom strictly carried into effect."

[42]See Appendix F *infra*. And see Bedau, *Volume and Rate of Capital Crimes*, in BEDAU, THE DEATH PENALTY IN AMERICA (Rev. ed. 1967) [hereafter cited as BEDAU], 56-74.

[43]UNITED STATES DEPARTMENT OF JUSTICE, BUREAU OF PRISONS, NATIONAL PRISONER STATISTICS, Bulletin No. 45, *Capital Punishment 1930-1968* (August 1969) [hereafter cited as NPS (1968)], p. 7.

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even in the 1930's such knowledgeable observers as Warden Lewis E. Lawes of Sing Sing recognized that the death penalty was not being generally enforced.[44] Nonetheless, let us take the 1935 national high-water mark of 184 first-degree murderers as a measure of some generality of enforcement of the death penalty for murder.

Imagine now 184 electrocutions and gassings in the United States in 1971. That is four times the number of human beings executed during any of the past ten years, and exceeds by 50 the total number of executions for the ten-year period.[45] If, in fact, 184 murderers were to be executed in this year 1971, we submit it is palpable that the public conscience of the Nation would be profoundly and fundamentally revolted, and that the death penalty for murder would be abolished forthwith as the atavistic horror that it is. Our detailed reasons for this submission follow. First, we pause for one additional paragraph to make our legal point clear.

We disagree not at all with the reasoning process, but we dispute the factual premise--unexamined then and now demonstrably incorrect--of the *dictum* announced by this Court thirteen years ago in *Trop v. Dulles*, 356 U.S. 86 (1958):

> ". . . Whatever the arguments may be against capital punishment, both on moral grounds and in terms of accomplishing the purposes of punishment--and they are forceful--the death penalty has been employed throughout our history, and, *in a day when it is still widely accepted*, it cannot be said to violate the constitutional concept of cruelty." (*Id.* at 99 (plurality opinion of Chief Justice Warren; emphasis added).)

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[44] LAWES, TWENTY THOUSAND YEARS IN SING SING (1932), 306-307, quoted at note 96, *infra*.

[45] See p. 37, *infra*.

We think that it is simply not correct that the death penalty is today "still widely accepted." We speak, for the reasons that we have already stated, not of its acceptance on the pages of the statute books, but of its acceptance in actual usage--and of such acceptance as it does not illegitimately obtain by being irregularly and arbitrarily applied. Far from being "widely accepted", the death penalty today is with rare public unanimity rejected and repudiated. We proceed next to demonstrate this point and to develop its constitutional implications.

III. THE PENALTY OF DEATH

The acceptance which a punishment is given by contemporary society, and its acceptability under that society's prevailing standards of decency, may be measured by objective indicators. In the case of the death penalty today, numerous indicators point in a single direction. Language requires that we state them one by one; but it is their plain convergence that, we think, marks the punishment of death as unacceptable, cruel and unusual.

(1) All informed observers of the death penalty agree in describing a world-wide trend toward its disuse that is nothing short of drastic.[46] This has been a relatively constant long-

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[46] UNITED NATIONS, DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS, CAPITAL PUNISHMENT (ST/SOA/SD/9-10) (1968) [hereafter cited as UNITED NATIONS] 81-82, 96-97, UNITED NATIONS, ECONOMIC AND SOCIAL COUNCIL, Note by the Secretary-General, *Capital Punishment* (E/4947) (February 23, 1971), pp. 3, 10; SELLIN, THE DEATH PENALTY (1959), published as an appendix to AMERICAN LAW INSTITUTE, MODEL PENAL CODE, Tent. Draft No. 9 (May 8, 1959) [hereafter cited as SELLIN (1959)], 4-14; Sellin, *The Inevitable End of Capital Punishment*, in SELLIN, (1967), 239-240; MATTICK, THE UNEXAMINED DEATH (1966) [hereafter cited as MATTICK], 5-6, WEIHOFEN, THE URGE TO PUNISH (1956) [hereafter cited as WEIHOFEN], 163-164; OHIO LEGISLATIVE SERVICE COMMISSION, STAFF RESEARCH REPORT No. 46, CAPITAL PUNISHMENT (1961), 16-30; Barry, *Hanged by the Neck Until . . .*, 2 SYDNEY L. REV. 401, 411 (1958);

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Analysis of Ehrlich Manuscript

On March 7, 1975, the Solicitor General of the United States lodged with the Court an unpublished manuscript by Isaac Ehrlich entitled "The Deterrent Effect of Capital Punishment: A Question of Life and Death" (National Bureau of Economic Research Working Paper No. 18, November 1973).[1] The author of this paper uses the statistical technique of linear regression analysis in an attempt to demonstrate that the threat of execution had a deterrent effect on the homicide rate in the United States between 1935 and 1969. His conclusion is that each additional execution during the period might "have deterred approximately eight murders." (U.S. Br. 35).

Linear regression analysis[2] is commonly employed by social scientists to examine hypothesized relationships between variables (e.g., the effect of cholesterol levels upon heart attacks, of a particular nutrient upon plant growth, of tax rates upon business investment). However, regression analysis is an exceptionally brittle tool of limited usefulness[3] if conditions make

1/ The cover of this paper bore the inscription: "NBER working papers are distributed informally and in limited number for comments only. They should not be quoted without written permission. This report has not undergone the review accorded official NBER publications; in particular, it has not yet been submitted for approval by the Board of Directors." In a March 27, 1975, letter responding to an inquiry from petitioner's counsel, National Bureau of Economics Research President John R. Meyer explained further that "The working paper in question has not been approved for National Bureau publication nor has it been submitted for approval .... It was not available to interested members of the public. A very limited number was circulated to interested scholars .... The NBER will not be publishing a paper on this subject in June 1975 nor is it considering publication at this time." (The full text of this letter is attached as Appendix D.) This NBER working paper will be referred to hereinafter as EHRLICH.

2/ For fuller explanation of this technique, see ANDERSON, INTRODUCTION TO MULTIVARIATE STATISTICAL ANALYSIS (1958); EATON, MULTIVARIATE STATISTICAL ANALYSIS (1972); KSHIRSAGAR, MULTIVARIATE ANALYSIS (1972).

3/ See, e.g., Campbell & Erlebacher, How Regression Artifacts in Quasi-Experimental Evaluations Can Mistakenly Make Compensatory Education Look Harmful, in 3 HELLMUTH, COMPENSATORY EDUCATION: A NATIONAL DEBATE 185-209 (1970).

it impossible to validate regression results with controlled experimentation. ...

> "[i]n most circumstances, ... any indications produced by a multiple regression analysis of observational data are merely a good hint to try for confirmation by a proper experiment. In a true experiment the independent variables will be properly randomized with a table of random numbers and will have low correlations differing from zero by only random fluctuation, or else in a completely balanced experiment the correlations will be exactly zero.
>
> The justification sometimes advanced that a multiple regression anaylsis on observational data can be relied upon if there is an adequate theoretical background is utterly specious and disregards the unlimited capability of the human intellect for producing plausible explanations by the carload lot." 4/

Regression analysis without controlled experimentation is especially dangerous when applied to phenomena affected by numerous variables because of the extraordinary sensitivity of the technique to omission of variables or misspecification of the mathematical form of relevant variables and its limited ability to reveal causal relationships among included variables. Furthermore, when the observed data constitute time series, spurious relationships are particularly likely to appear.[5] For all these reasons, it is necessary to use the utmost care in deriving policy implications from multivariate analysis: "multiple linear regression techniques ... can be very useful but also very dangerous if improperly used and interpreted .... [The results are] easily misused and misunderstood."[6]

Although the mathematical analysis in the Ehrlich manuscript is technical, the basic demonstration undertaken is relatively simple. Ehrlich attempts to use regression analysis to estimate the effect of one variable — the execution rate — upon the rate

4/ BROWNLEE, STATISTICAL THEORY AND METHODOLOGY IN SCIENCE AND ENGINEERING 455-456 (2 ed. 1965).

5/ SNEDECOR & COCHRAN, STATISTICAL METHODS 189 (6th ed. 1968); Yule, Why Do We Sometimes Get Nonsense-Correlations Between Time-Series? A Study in Sampling and the Nature of Time, 89 J. ROYAL STATIS. SOC. 1-69 (1926).

6/ DRAPER & SMITH, APPLIED REGRESSION ANALYSIS 234-236 (1966).

variables which he posits will also have an impact on the number of murders. He begins with the "basic proposition" that "the propensity to perpetrate ... [capital] crimes is influenced by the prospect of gains and losses associated with their commission." EHRLICH 5.[7] Assuming that the murder rate is a function of eight independent variables — probability of arrest (P_a); probability of conviction given arrest ($P_{c|a}$); probability of execution given conviction ($P_{e|c}$); national aggregate measures of the percentage of the population between age 14 and 24 (A); unemployment (U); labor force participation (L); permanent income (Y_p); and chronological time (T) — Ehrlich further assumes that the murder rate may be expressed in exponential form by the following equation:[8]

$$\text{murder rate} = K P_a^{\alpha_1} P_{c|a}^{\alpha_2} P_{e|c}^{\alpha_3} U^{\beta_1} L^{\beta_2} Y_p^{\beta_3} A^{\beta_4} T^{\beta_5} (\exp)^{v}$$

In other words, he assumes that the murder rate is a function of these particular eight variables in the particular relationship to each other and to murder that his mathematical equation expresses. He reports results using the logarithmic rather than the natural values of his variables. After estimating values of the three deterrence variables, P_a, $P_{c|a}$, $P_{e|c}$, he uses a computer computational technique to select coefficients for the independent variables which fit his particular equation to the data. He

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7/ Ehrlich further posits that "[t]here is no a priori reason to expect those who hate, or, for that matter, those who love other persons to be less responsive to changes in costs and gains associated with activities they may wish to pursue in accordance with their preferences than persons who are indifferent toward the well-being of others," EHRLICH 6; that the death penalty constitutes for the average potential criminal a more severe form of punishment than life imprisonment, id. at 8; and that "a necessary and sufficient condition for murder to occur" is that a potential murderer's "expected utility from crime exceed his expected utility from an alternative (second best) action," id. at 7.

8/ In this equation, the term "(exp)" denotes the base of natural logarithms and "v" denotes a random error variable with zero mean and a finite variance. In the regression, the natural logarithm of the variable T in modified first differences is not used; rather, the modified first difference of the variable itself is utilized. See EHRLICH 27.

1935-1969 and concludes that each additional execution during this period would have prevented "7 or 8," EHRLICH 42, "30," id. at 43, "32," ibid., "1 to [sic] 17," ibid., or "between the limits of 0 and 24," ibid., murders.

Although the Government's brief asserts that "this study at the least indicates that there is important empirical support for the a priori logical belief that the use of the death penalty decreases the number of murders" (U.S. Br. 36), an examination of the Ehrlich manuscript reveals that such a conclusion is completely unfounded. The paper is riddled with theoretical and technical errors that render its conclusions meaningless. Despite the complicated array of mathematical symbols and econometric terminology, the draft is a creation of mere arbitrary assumptions, misleading summarizations, and reckless inferences. It is marked by evasiveness about data sources and failure to test effectively the validity of the theoretical model on which the paper's conclusions depend. The nature of the evidence and analysis which it marshals in support of the argument for the deterrent effect of capital punishment is of such poor quality that the manuscript casts no doubt at all on the conclusion of every other systematic study over half a century:[9] that the

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9/ Ehrlich's "sophisticated regression analysis" (U.S. Br. 9) is, in fact, inferior in several respects to the less hieroglyphical earlier studies. Behind the Ehrlich model is the assumption, see p. 10c infra, that whatever variables determine the murder rate in, for example, Vermont also determine the murder rate in exactly the same way in Mississippi. The data in the paper is derived from the United States as an undifferentiated whole, and the estimating procedures encompass all States, including those which have abolished the death penalty. Ehrlich's failure to specify data sources (as noted infra, see note 18) makes it impossible to be certain how some data is derived; but he frequently adverts generally to National Prisoner Statistics (see, e.g., EHRLICH F8 n.23; F11 n.29). His aggregation of this data, without indicating its limitations, ignores the explicit warning attached to the NPS statistics by the United States Department of Justice:

> "'Whereas NPS is a voluntary program, many reporting jurisdictions have been unable to provide program data to due [sic] exigencies related to each budget, personnel, or program situation. As a result, the statistics

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crime penalty shows no deterrent effect upon murders.

1. Arbitrary Choice of Explanatory Equation.

Regression analysis often requires the use of essentially

9/ (cont'd)

> * * * are not complete and do not represent composite nationwide figures. [Consequently they] should be used primarily in making year-to-year comparisons in those States where all required information was reported.' . . . Particular care should be taken in analyzing differences from year to year, as well as across States. Variations in annual figures are often the product of nothing more than changes in reporting practices. For example, special care should be taken in analyzing data subsequent to 1967. When publication of the national prisoner statistics lapsed for 3 years after 1967, data eventually collected for 1968, 1969, and 1970 were less complete and reporting by some States was less rigorous than in previous years."

U. S. DEPT. OF JUSTICE, SOURCEBOOK OF CRIMINAL JUSTICE STATISTICS 1973 (1973) at 346 (this warning is quoted from the annual NPS reports). Earlier studies avoided such data aggregation problems by using a cross-sectional analysis of individual states. See, e.g., Chambliss, Types of Deviance and the Effectiveness of Legal Sanctions, 1967 WIS. L. REV. 703, 706; Schuessler, The Deterrent Influence of the Death Penalty, 284 ANNALS 54, 58 (1952); MATTICK, THE UNEXAMINED DEATH 11 (1966); Reckless, The Use of the Death Penalty -- A Factual Statement, 15 CRIME & DELINQ. 43, 44-47 (1969); Sellin, Homicides in Retentionist and Abolitionist States, in SELLIN (ed.), CAPITAL PUNISHMENT 135-138 (1967). Furthermore, because of the mathematical form specified, the Ehrlich model is incapable of utilizing $P_{e|c}$ variables when the variable value equals zero, see pp. 7c-8c infra. Thus, this analysis cannot be focused upon the effect of abolishing and subsequently reintroducing the death penalty in a particular state. Earlier studies analyzed these phenomena and concluded that abolition and reintroduction of the death penalty had no effect on the homicide rate. See, e.g., Cobin, Abolition and Restoration of the Death Penalty in Delaware, in BEDAU (ed.), THE DEATH PENALTY IN AMERICA 359, 373 (rev. ed. 1967); Dann, Abolition and Restoration of the Death Penalty in Oregon, id. at 343, 350; Sellin, Experiments with Abolition, in SELLIN (ed.), CAPITAL PUNISHMENT 122-124 (1967); FATTAH, A STUDY OF THE DETERRENT EFFECT OF CAPITAL PUNISHMENT WITH SPECIAL REFERENCE TO THE CANADIAN SITUATION (Department of the Solicitor General, Canada, Research Centre Report No. 2, 1972) at 55-62; Samuelson, Why Was Capital Punishment Restored in Delaware? 60 J. CRIM. L., CRIM. & POL. SCI. 148, 150-151 (1969).

10/ The assertion that pre-Ehrlich studies "have relied not upon the actual use of the death penalty, but upon its statutory authorization as the independent variable against which the murder rate was compared," (U.S. Br. 36 (emphasis in original)) is simply incorrect. Studies have been conducted of the correlation between homicide rates and lagged execution risk for eleven states over a seventeen year time series, Schuessler, The Deterrent Influence of the Death Penalty, 284 ANNALS 54 (1952); of a similar correlation between homicide rates and execution risk for a fifty year period in Ohio, see OHIO LEGISLATIVE SERVICE COMM'N, STAFF REPORT NO. 46 -- CAPITAL PUNISHMENT (1961); of homicide rates in the weeks before and after well publicized executions, Dann, The Deterrent Effect of Capital Punishment, FRIENDS SOCIAL SERVICE SERIES, Bulletin No. 29 (Third Month) 19 (1935); Savitz, The Deterrent Effect

arbitrary assumptions about the mathematical form of the relationship (e.g., whether the relevant variables combine multiplicatively or additively). One may have confidence in the results only if it can be established ex post that the result is insensitive to an initially arbitrary assumption. Ehrlich's work is, however, completely dependent upon his initial assumption of a particular mathematical form. When the assumption is varied — i.e., when another equally reasonable mathematical form for the regression is substituted — the apparent deterrent effect of execution vanishes. 12/ To put the matter

10/ (cont'd)

of Capital Punishment in Philadelphia, in BEDAU (ed.), THE DEATH PENALTY IN AMERICA 315-322 (rev. ed. 1967); Graves, The Deterrent Effect of Capital Punishment in California, id. at 322-332. And the Government's assertion that all of the available studies of the deterrent effect of capital punishment "have evaluated the effect of the death penalty on the overall murder rate, rather than on the rate of capital murders" (U.S. Br. 36) is similarly mistaken. A recent study has used data that "permit a direct . . . assessment of the relationships between capital homicides and the death penalty." Bailey, Murder and the Death Penalty, 65 J. CRIM. L. & CRIM. 416, 418 (1974). "The findings . . . are . . . consistent with those of earlier investigations of homicide and contrary to the results deterrence theory would predict." Id. at 423. Ehrlich's study does evaluate "the effect of the death penalty on the overall murder rate" (U.S. Br. 36).

11/ For example, a curious result of the form chosen by Ehrlich is that there is a hypothesized constant elasticity relation between the probability of execution given conviction ($P_{e|c}$) and the murder rate throughout the range of the data. In other words, a certain percentage change in the execution rate will effect a fixed percentage change in the murder rate at any level. Nothing justifies such an assumption. (Moreover, any change in the execution rate after a year in which there were no executions is undefinable in percentage terms.)

There also appears to be no justification for some of the relationships assumed. For example, the proportion of 14-24 year-olds in the population, A, might be incorporated in the regression as a squared term rather than as the value itself. This particular specification could be supported by assumption, just as Ehrlich has justified his use of A itself in a multiplicative form; or on grounds that each additional 14-24 year-old added to the population contributes to crime both independently of his contemporaries and in a consortium with them; or by observing that it produces a regression equation that fits the data better.

12/ For a demonstration of the inversion of Ehrlich's results using a similar multiple regression analysis with a different mathematical form, see Passell & Taylor, The Deterrent Effect of Capital Punishment: Another View, Columbia University Discussion Paper 74-7509 (March, 1975) at 6e-7e (appended infra as Appendix E and hereinafter cited as PASSELL & TAYLOR).

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simply, Ehrlich's conclusion is an artifact of his mathematics and proves nothing at all about the real world. His statement that "[t]he regression results are found to be robust with respect to the functional form of the regression equation" (EHRLICH 36) is misleading and erroneous.

In addition, Ehrlich's model is faulty both in its theoretical structure and in the objective variables chosen as substitutes for the hypothesized variables. It is structured in such a way that the inevitable errors in data gathering over long periods of time will artificially produce a negative correlation between the critical independent variable $P_{e|c}$ and the murder rate.[13] It cannot cope with years in which there are no executions (and in which $P_{e|c}$ would thus equal zero) because the logarithm of zero cannot be taken. Ehrlich deals with this problem by another arbitrary assumption. Although the actual number of executions in the years 1968, 1969, and 1970 was zero, he assumes that it was one. But because his mathematical form requires only that the coefficient of $P_{e|c}$ in these years not equal zero, a better approximation of reality in this time period would have been to assume that the number of executions was a fraction very close to zero. Such an assumption, unhappily for Ehrlich, would defeat his estimation and utterly destroy his demonstration of a deterrent effect stemming from executions; so he chooses not to

13/ The key variable, $P_{e|c}$, is measured in such a way as to induce an artificial inverse relationship with the murder rate. In a footnote (EHRLICH F8 n.23), Ehrlich indicates that the denominator of this variable is measured as

$$c \equiv Q^{\circ} \cdot P^{\circ}_{a} \cdot P^{\circ}_{c|a} \cdot$$

Since the numerator of his dependent variable, the murder rate, is Q°, and since Q° is contained in the denominator of his independent variable $P_{e|c}$, it follows that measurement error (in any direction) in Q° would bias his key coefficient negatively. So if, for example, some crimes that were classified as "homicides" in one year would have shown up as "manslaughters" or "suicides" or "missing persons" if they occurred in another year, for whatever reasons (see note 9 supra), then Ehrlich's model will have found some degree of systematic negative relationship between the murder rate and the conditional execution probability due to this measurement error.

make it. Similarly, when he substitutes objectively measurable factors for his hypothesized variables,[14] the substitution is frequently arbitrarily made.[15]

Finally, the precise mathematical estimates of the deterrent effect of capital punishment generated by the Ehrlich model are unacceptable because of his failure to identify data sources, to justify data manipulations, and to employ reliable statistical procedures.[16] The sources of the data used in his paper are not identified, making it extremely difficult to replicate the results described in the paper[17] or to check the correctness of the data

14/ Indeed, the theoretical justification for substituting the three objective deterrence variables is itself open to question. Such substitution entails, for example, the assumptions that the individual potential killer in Maine is deterred by knowledge of an execution in Georgia, and that the clearance rate for murder in California affects the expectation of apprehension of the potential murderer in Alabama.

15/ For example, the same pages of the UCR data from which Ehrlich presumably obtained his clearance rate statistics (which are used as an objective measure of the probability of arrest) show a separate figure for arrests. Ehrlich provides no justification for his choice of clearance rate as an objective surrogate for P_a: he neither tests both surrogates nor theoretically justifies his preference. To be sure, clearance rates include crimes which are committed by more than one person and therefore may represent, better than arrest rates, the likelihood of being apprehended for a crime; but clearance rates also include a considerable number of confessions by persons in custody for other crimes (as well as murder-suicide episodes) and are, in this way, less suitable than arrest statistics in demonstrating the probability of apprehension for a crime.

16/ Ehrlich fails to report readily available tests that show how well the functional form of the regression equation he uses fits the data in comparison with other standard functional forms. For examples of such tests, see DRAPER & SMITH, APPLIED REGRESSION ANALYSIS 163-216 (1966).

17/ The procedures by which Passell & Taylor generated data similar to those used by Ehrlich are described infra. PASSELL & TAYLOR 14e . The discrepancies which appear when even slightly different data are used attest to the extreme instability of the model. Id. at 3e .

and computations used.[18] Derivation of the results is further clouded by frequent reliance on obscure (rather than publicly available) data sources[19] and by generation of non-empirical data by undescribed interpolation methods.[20]

18/ The obscuring of data sources and the frequent failure to describe computations makes it difficult to check the correctness of the mathematical calculations in the manuscript. A number of clear errors occur, however. Table 3 (which provides a rare opportunity to check Ehrlich's computations) contains at least two errors: the natural logarithms of the means for the $P_{e|c}$ and U variables are incorrectly calculated. A central finding of an earlier Ehrlich study (of the deterrent effect of expenditures for police) was revised between successive published versions, compare Ehrlich, Participation in Illegitimate Activities: A Theoretical and Empirical Investigation, 81 J. POL. ECON. 521 (1973) with Ehrlich, Participation in Illegitimate Activities: An Economic Review, in BECKER & LANDES (ed.), ESSAYS IN THE ECONOMICS OF CRIME AND PUNISHMENT 68 (1974), because a dichotomous variable representing Southern states (an incidental variable used primarily for the purpose of statistical control) was improperly weighted. This produced a revision from -3.04 percent to -1.42 percent in Ehrlich's estimated effect on the crime rate of a one percent increase in police spending.

19/ See, e.g., note 25 EHRLICH F9 n.25: "I am indebted to Edi Karni for making available to me his calculations of Y_p."

20/ See, e.g., EHRLICH Table 3, note a: "The figures for $P^{\circ}_{c|a}$ (1933-1935) and XPOL (all the odd years 1933-1951) were interpolated via an auxiliary regression analysis."

2. Incorrect Assumptions Concerning the Stability of Causation of Homicides Over Time

Any statistical inference about deterrence from Ehrlich's regression analysis depends upon the assumption of temporal homogeneity -- i.e., that the exact mathematical relationship among Ehrlich's eight independent variables and the murder rate remained constant over the entire measurement period 1935-1969. This is only one of several curious assumptions of homogeneity that are concealed in Ehrlich's basic equation. See, e.g., notes 9, 10, 11, supra. The equation is akin to assuming, for example, that an increase in highway speed will have an identical quantitative effect (in percentage terms) on traffic accidents whether the increase is made from five miles per hour to ten miles per hour or from fifty miles per hour to one hundred miles per hour -- whether it occurs in New York or New Mexico -- whether it occurs under the traffic conditions of 1935 or 1969 -- etc. In Ehrlich's case, most of these kinds of assumptions are both questionable and unverifiable in terms of his data; but his assumption of temporal homogeneity is verifiable, and it is wrong. A separate statistical test of temporal homogeneity reveals that, for the estimation period 1935-1962, no deterrent effect such as Ehrlich finds for 1935-1969 is discernible. During the 1935-1962 period, in fact, the effect of capital punishment in Ehrlich's model, was to encourage rather than to deter murder.[21] We should make clear that this does not mean Ehrlich has shown a deterrent effect for one period but not for the other. Rather, it means that because of an erroneous assumption of homogeneity among included periods, Ehrlich has shown nothing at all. His assertion that "the qualitative results reported in Table 4 are insensitive to changes

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21/ See PASSELL & TAYLOR, infra, at 4e-6e.

in the specific interval of time investigated in the regression analysis, as indicated by the results reported in Table 7" (EHRLICH 37) is in error.

Thus (as Ehrlich himself hints in a footnote (EHRLICH F10, n.28)), the entire burden of his conclusions regarding the deterrent effect of capital punishment rests on the time period 1963-1969. Of course, executions fell from few to none during the 1960's and murders rose during this period. But crime in general rose during the 1960's -- far more sharply than did murders[22/] -- so that Ehrlich's results reflect nothing more or less than an observation of the general crime trend of the sixties which conveniently ignores both the steep climb of other crimes relative to murder and the numerous factors relevant to the rise of all crime in 1963-1969.[23/] During this period, for example, the number of hand guns in the possession of the public skyrocketed, racial friction escalated, expectations about the abolition of poverty were raised and dashed, juvenile delinquency

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22/ See footnote 30 to the text of this reply brief, p. 18, supra.

23/ Ehrlich fails to correct his 1960's murder statistics for this general crime rise. While it may be impossible to isolate all of the factors which led to the general increase in crime, it would be possible to adjust the murder rate for these years to compensate for conditions which were causing a general crime rise. Furthermore, Ehrlich has failed to include as a control variable in this study a variable, income dispersion, which he earlier posited to have a significant relation to the crime rate, even though he attempts to explain variation in precisely the same dependent variable (the murder rate) in both studies. See Ehrlich, Participation in Illegitimate Activities: An Economic Review in BECKER & LANDES, ESSAYS IN THE ECONOMICS OF CRIME AND PUNISHMENT 68-134 (1974). In the earlier study, id. at 101, Ehrlich incorporated a measure of income dispersion as a factor to be taken into account in his regression equation analyzing the effects of changes in the probability and length of incarceration on the murder rate. For reasons that are unclear, he does not use this as a control variable in his capital punishment study, despite the fact that the United States Census Bureau keeps data on the distribution of income throughout the country in time series. See, e.g., UNITED STATES DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS, CURRENT POPULATION REPORTS: CONSUMER INCOME, Series P-60, No. 97 (1975).

increased, the abuse of narcotic drugs increased, and economic crime (robbery, burglary) multiplied. All of these variables have dimensions which are objectively measurable, yet all are excluded from Ehrlich's analysis.[24/] Under the arbitrary and inflexible Ehrlich model, the contribution of all these variables to the murder rate rise is unknowable, and even the most tentative assertion that the decline in executions during 1963-1969 was responsible for this rise is by ipse dixit rather than statistical demonstration.[25/]

Furthermore, although Ehrlich made an earlier study of non-capital crimes which concluded that the length of prison sentence

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24/ An earlier Ehrlich econometric study, Ehrlich (1974), note 23, supra, found an apparent deterrent effect on the crime rate based on both the probability and severity of punishment. However, a replication of this study, using data from a later period, which included variables reflecting population density, population migration, and broken family rates, demonstrated that the apparent deterrent effect disappears under a model that incorporates a larger set of explanatory variables. Forst, Participation in Illegitimate Activities: Further Empirical Findings, 2 POLICY ANALYSIS (No. 3) (Univ. of Cal. Press) (to be published Summer, 1976).

25/ Ehrlich recognizes the critical importance of the years 1962-1969 to the results he demonstrates (EHRLICH F10 n.28) but asserts that this interval is "particularly important . . . because of the greater variability exhibited in this sub-period by P_a, $P_{c|a}$, $P_{e|c}$." Ibid. In view of the failure to control for other variables affecting the homicide rate during the 1960's the assertion is utterly groundless.

is an important deterrent,[26] his present capital punishment study fails to control for variations in the length of prison sentences imposed upon convicted murderers who were not sentenced to death. Rather, Ehrlich arbitrarily (and incredibly) assumes that alternative sentences for homicides were constant during the period he surveyed. EHRLICH 43-44. Given Ehrlich's own theory of the deterrent efficacy of punishments generally, it is obvious that the rise in the homicide rate during the 1960's -- critical to Ehrlich's ultimate conclusion -- might be more than adequately explained by the decline in length of prison sentences imposed for homicide during this period.[27] But even this is not the full measure of the deficiency of Ehrlich's model arising from his failure to consider other punishments than death. The plain fact is that Ehrlich does not purport to address the only deterrence question that is relevant to a choice between capital punishment and other criminal penalties: their relative deterrent effect. Ehrlich attempts to predict the differential effect of increasing the number of executions during the 1935-1969 period, but he nowhere attempts to compare the effect of the imposition of life imprisonment on the homicide rate to the effect of the imposition of the death penalty (e.g., by comparing the coefficient of $P_{LI|c}$ to that of $P_{e|c}$).

26/ EHRLICH (1974), note 23, supra.

27/ Data from the 33 States that reported both in 1960 and in 1970 indicates that the mean length of prison sentence appears to have declined during this period. In 1960, 46.8% of prisoners released who had been convicted of homicide had served at least five years; in 1970, only 35.8% of this group had served this long a term. UNITED STATES DEPARTMENT OF JUSTICE, BUREAU OF PRISONS, NATIONAL PRISONER STATISTICS: PRISONERS RELEASED FROM STATE AND FEDERAL INSTITUTIONS 1960 (undated) at 23-70; UNITED STATES DEPARTMENT OF JUSTICE, BUREAU OF PRISONS, NATIONAL PRISONER STATISTICS, STATE PRISONERS: ADMISSIONS AND RELEASES 1970 (undated) at 47-81.

3. Interdependence of "Independent" Variables

The theoretical portion of Ehrlich's paper acknowledges that the interrelations between society, the judicial system and the behavior of murderers are complex. Potential murderers are assumed to respond to incentives -- the probability of punishment, the severity of punishment, etc. -- but the incentive structure itself is simultaneously determined by the number of murders taking place. Thus, while punishments affect murder rates, murder rates also affect punishments. Moreover, the variables that influence murderers in Ehrlich's model are themselves interrelated: the probability of jury conviction for murder (a possible deterrent) is not unrelated to the probability of execution given conviction (another possible deterrent). Measuring the deterrent effect of executions on murders while holding all other variables constant is impossible; all other variables cannot be held constant because of their interrelationship.[28]

The problem here is that a single equation does not get to the root of the relevant relationship (the net impact of executions upon murders in the United States). It is perhaps made clearest by analogy. If one ignores relationships in the way that Ehrlich does, it might be possible to demonstrate statistically that a team of midgets will win the American League Pennant because -- holding constant batting, fielding, pitching, and base-running -- midgets have a smaller strike zone than normal players, and will therefore draw more walks and consequently score more runs. The force of the statistical demonstration

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28/ For a more detailed discussion of these problems, see PASSELL & TAYLOR, infra, at 7e-10e.

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is powerful until one considers whether a team of midgets really can bat, field, pitch, and run bases like the Oakland A's. Ehrlich's own inadequate appreciation of the problem of interrelationship among the variables determining murder rates is peculiarly damaging to his conclusion because, under his theoretical model, convictions have a stronger deterrent effect on murder than do executions.[29/] Therefore, if it is the case -- as knowledgeable observers have repeatedly asserted (see references cited in Pet. Br. 90 n.13) -- that the probability of execution-given-conviction decreases the probability of conviction, Ehrlich's model suggests that capital punishment will actually increase the rate of murders. We say "suggests" because the model with its manifold defects is as incapable of demonstrating this conclusion as it is of demonstrating anything else.

29/ Ehrlich explicitly posits that the probability of conviction has a greater deterrent effect than the probability of execution: "A fortiori, a one percent increase in $P_{c|a}$ is expected to have a greater deterrent effect than a one percent increase in $P_{e|c}$ as long as $P_{e|c}$ is less than unity." EHRLICH 10. The elasticity coefficients derived for $P_{a|c}$ are consistently stronger than those derived for $P_{e|c}$. See also EHRLICH 9-11, 20, 34, 46.

The Ehrlich manuscript is, then, so deeply flawed that it neither adds to our knowledge concerning the deterrent efficacy of criminal punishment nor calls into question the previous studies of the deterrent effect of the death penalty. Among other defects: (1) The result is completely dependent upon arbitrary assumptions regarding the mathematical form of relationships among variables; equations based upon alternate assumptions produce opposite results. (2) An opposite result is obtained by similar analysis of the period 1935-1962; the Ehrlich result is therefore dependent upon the assumption that the increase in murder rates during the 1960's was determined by the simultaneous decrease in execution rates rather than by the factors which the Ehrlich equation fails to control and which are known to have contributed to a general increase in crime rates over that period. (3) The Ehrlich analysis ignores the interdependence of relevant variables: most notably the probability (based upon the most consistent observation of modern use of the death penalty -- the phenomenon of jury nullification) that a significant increase in execution rate will result in a decrease in conviction rate. Yet, the decrease in conviction rate should, by Ehrlich's own analysis, increase murder rates sufficiently to offset any deterrent value of execution. The precision of Ehrlich's announced results, in the face of the data limitations and the theoretical problems involved in accurately isolating and quantifying the factors which influence the murder rate, is utterly delusory and constitutes a serious distortion of the proper

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uses of linear regression analysis. The fact that the conclusions of the Ehrlich study stand so starkly alone, in contradiction to over half a century of research, see Pet. Br. App. E. at le-10e, is itself a significant indication of the study's abandonment of scientific method to cybernetic technology:

> "no scientist should be persuaded to abandon his scientific insight and principles in favor of some computerized statistical screening procedure. The use of multiple regression techniques is a powerful tool only if it is applied with intelligence and caution." 30/

30/ DRAPER & SMITH, APPLIED REGRESSION ANALYSIS (1966) 242.

APPENDIX D

March 27, 1975, letter from National Bureau of Economic Research, Inc., President John R. Meyer to Counsel for Petitioner.

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NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

261 MADISON AVENUE, NEW YORK, NEW YORK 10016
(212) 682-3190 CABLE: NABURECON, NEW YORK

NEW YORK
NEW HAVEN
CAMBRIDGE
PALO ALTO
WASHINGTON

March 27, 1975

Mr. David E. Kendall
NAACP Legal Defense and Educational Fund, Inc.
10 Columbus Circle
New York, N.Y. 10019

Dear Mr. Kendall:

This is in reply to the questions contained in your letter of March 17.

1. Has this report been oficially approved in any way by the NBER?

Answer: The working paper in question has not been approved for National Bureau publication nor has it been submitted for approval.

2. Was this report previously available to interested members of the general public?

Answer: It was not available to interested members of the public. A very limited number was circulated to interested scholars.

3. What is the nature of the "informal" distribution of NBER working papers?

Answer: NBER policy concerning the reproduction and distribution of working papers is outlined in two memoranda by Robert T. Michael, Assistant Vice President, dated June 20, 1973. Copies of these memoranda are enclosed.

4. What is the nature of the review process accorded official NBER publications?

Answer: The policies and procedures governing NBER review of publications are described in the front of each official NBER publication. I enclose a copy of this as well.

5. What is the relationship between the November, 1973, Ehrlich paper and the paper which NBER will publish in June 1975?

Answer: The NBER will not be publishing a paper on this subject in June 1975 nor is it considering publication at this time. Professor Ehrlich is

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publishing a much reduced version of the working paper in the American Economic Review in June 1975. This paper is not an official NBER publication and this fact will be clearly stated. Professor Ehrlich is now working on an extension of his research making use of cross-state comparisons. It is possible that this newer work may be combined with some of his previous work and, if review by the staff leads to that recommendation, might be submitted for official NBER review at some later time.

I hope these answers are sufficiently responsive. If additional information is required, please contact us.

Sincerely yours,

John R. Meyer

JRM:jh

[NOTE: the documents referred to in #3 and #4 of this letter, and appended to it, have been omitted because they do not appear presently relevant.]

APPENDIX E

Peter Passell & John B. Taylor, Columbia University Discussion Paper 74-7509 (March, 1975), The Deterrent Effect of Capital Punishment: Another View

Introduction

In a recent paper Isaac Ehrlich (1975) has discovered a negative relationship between the use of the death penalty and homicide rates in the United States over the last four decades. This empirical finding takes on special meaning because (a) it is the first test of the capital punishment deterrence hypothesis to use simultaneous equation estimation techniques; (b) its publication comes at a time when state legislatures and the courts are reshaping policy on the imposition of the death penalty. Hence the importance of a second look at Ehrlich's result.

Such a re-examination, described below, shows that the time series model and data used by Ehrlich permit no inference whatsoever about the deterrent effect of capital punishment. His findings are extremely sensitive to essentially arbitrary choices of model specification and to the period over which the model is estimated. Moreover, estimation of a single structural equation sharply limits the policy implications of the estimated coefficients.

Section I describes the replication of Ehrlich's murder rate function, Section II tests the model for temporal homogeneity, and Section III examines its sensitivity to changes in functional form. Finally, Section IV examines the pitfalls of inferring an execution-murder trade-off from a single equation.

I. Model Replication

A representative sample of the empirical results reported by Ehrlich in support of the deterrence effect of capital punishment is his equation 1, Table 4 which is displayed as our equation (a), Table A; we use the same notation as Ehrlich. In this regression

equation the logarithm of the U.S. annual murder rate $(Q/N)^{o}$ is explained by the logarithm of three deterrence variables (the clearance rate for murder (P^{o}_{a}), the conviction rate for murder ($p^{o}_{c/a}$), and the execution rate for murder lagged one year $(PXQ_1)_{-1}$) as well as by the logarithm of five other explanatory variables (the labor force participation rate (L), the fraction of the population between 14 and 24 years of age (A), permanent real per capita income (Y_p), the unemployment rate (U), and an exponential time trend (e^{T})). The equation is estimated by a two-stage procedure in which P^{o}_{a} and $P^{o}_{c/a}$ are treated as endogenous variables, and are first regressed on current and lagged values of the predetermined variables, lagged values of all the endogenous variables, and a group of otherwise excluded exogenous variables (real police expenditure per capita (XPOL), real government expenditure per capita (XGOV), and the fraction of nonwhites in the population (NW)). In the second stage an iterative procedure is used to estimate the first order serial correlation coefficient along with the coefficients of the endogenous and predetermined variables.

For the purpose of this paper the important estimated coefficient of equation (a) is that of $(PXQ_1)_{-1}$ which is negative and significant. It is such an estimate which Ehrlich uses to calculate that one additional execution per year may result in as many as 17 fewer murders.

Ehrlich presents several variations on this same model (Ehrlich, Tables 3 and 4), among which the major differences are the use of alternatives to $(PXQ_1)_{-1}$ as empirical surrogates for $P_{e/c}$, the subjective conditional probability of execution given conviction.[1] Neither prior judgment nor the estimated coefficients provide much basis for choosing among the alternative forms. We

chose to concentrate our research on the form represented by equation (a), because it is the most common in Ehrlich's tables and permits convenient comparisons with the tradeoffs computed by Ehrlich.

Equation (b) of Table A shows one attempt to replicate equation (a) using the same iterative procedure to estimate the first-order serial correlation coefficient p in the second stage. Explicit definitions and sources for all variables used in this replication are found in the Appendix. Note that many of the estimated coefficients and t-ratios in equation (b) are substantially different than in equation (a). In particular, the estimated coefficient of $(PXQ_1)_{-1}$ is not statistically significant[2] in equation (b).

This discrepancy can be ascribed either to seemingly minor differences in the data or to unspecified procedures for creating variables or estimating missing observations. Since Ehrlich does not specify such procedures it is impossible to exactly duplicate his results (the apparent sensitivity of the Ehrlich results to minor data variations is, however, striking).[3] Our permanent income series is different because Ehrlich's method of calculation is not stated. Further, our labor force participation series[4] is different, as are the missing observations on police expenditure which Ehrlich estimates by an unspecified interpolation or smoothing procedure. Probably more important, however, is the 1933-35 data on conviction rates not collected by the UCR and estimated by Ehrlich using an unspecified auxiliary regression which could not be duplicated. Instead we used an alternative data source, the Judicial Criminal Statistics estimates of percent of persons found guilty as charged for murder.[5]

It is quite likely that this pre UCR data discrepancy is the reason for the major discrepancy between our estimate of p and Ehrlich's. Therefore, we re-estimated the equation constraining p to be .059 in equation (c). These estimates are closer to Ehrlich's, particularly with regard to the significance of the three deterrent variables.

In order to minimize the effect of the 1933-35 data,[6] we truncated these years from the sample. The results of this estimation are found in equation (d) and are quite similar to Ehrlich's. In particular the coefficient of $(PXQ_1)_{-1}$ is significant and the coefficients of $\hat{p}^o_a$ and $\hat{p}^o_{c/a}$ have the same relative values found by Ehrlich.[7] Confidence in the comparability of equation (d) with (a) is reinforced by the similarity between our estimate with an additional three years truncated (equation(e)) and Ehrlich's estimate over the same period (see his equation 6, Table 4). In any case for the sensitivity analysis of the following Sections, equation (d) will be taken to represent Ehrlich's model and empirical findings.[8]

II. Temporal Homogeneity

Behind the use of time series estimation is the assumption that the structure and the coefficients to be estimated remain stable over the sample period. In Ehrlich's case it is assumed that the behavior of potential murderers is governed by the same variables with the same coefficients over the period 1938-1969. If this assumption is in fact not correct, the estimated function would have little use either as an explanation of the causes of murder or of the policy implications of changing the value of an exogenous variable in the structure.

The assumption can be tested. Consider for example the hypothesis that the murder rate function estimated in equation (d) has the same structure from 1938-1962 as from 1963-1969. Equation (f) Table B with the time series truncated at 1962 was estimated to test this hypothesis. The F - ratio, computed from the sums of squared residuals in equations (d) and (f) was 4.715, significant even at the 99% level. Thus the hypothesis of structural homogeneity must be rejected. Further, there is nothing special about the sample periods chosen for this test.[9] Similar tests were computed for the four possible structural shift points from 1961-1964; the F - ratio indicates a significant shift for each of these periods. It is clear therefore that Ehrlich's equation has been estimated over different regimes, a fact which vitiates the validity of his estimates.

Since our primary interest is in the deterrent effect of capital punishment, it is important to note that the coefficient of $(PXQ_1)_{-1}$ is very different in equations (d) and (f): turning from negative and significant to positive and insignificant when the sample period is changed. The F-test for the entire equation does not, however, rigorously exclude the possibility that changes other than changes in the coefficient of $(PXQ_1)_{-1}$ have generated the statistical significance.

Equations (g) and (h) in Table B provide a test of the hypothesis that the coefficient of $(PXQ_1)_{-1}$ is the same over two sample periods under two different sets of assumptions. In equation (g) we add a variable, P63, equal to zero in the years 1938-1962 and to $(PXQ_1)_{-1}$ in the years 1963-69. The t-ratio of this variable gives a test of this homogeneity hypothesis, given that all other coefficients are the same over the two periods. The

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value of the statistic indicates rejection of the hypothesis at the 95% level. To equation (h) we add another variable, C63, equal to 0 from 1938-62 and to 1 from 1963-69. The t-ratio of P63 in this equation gives a test of the hypothesis of homogeneity of the coefficient of $(PXQ_1)_{-1}$, given that all variables except the intercept are stable over the two periods. The value of this statistic also indicates rejection of homogeneity.

III. Specification Sensitivity

Theory suggests that an econometric structure should be specified in the mathematical form which conforms most closely to behavioral expectations. In practice, forms are usually chosen which are linear in the parameters to make it possible to interpret the statistical properties of the estimators. And commonly, the logarithmic form is chosen to facilitate interpretation of the linear parameter estimates as partial elasticities. In this latter case, the procedure is often justified ex ante on economic grounds -- relationships are expected to exhibit constant elasticities in the relevant range; or, ex post -- the log-linear form is more consistent with the data than alternative forms.

In the case of Ehrlich's choice of the log-linear form, neither justification is convincing. While the elasticity of murder rates with respect to the conditional probability of execution might be approximately constant over some range of the variables, we see no reason why this constant elasticity should hold over the very large range in the observed time series. In fact such an assumption is absurd when the estimated probability of execution drops to zero beginning in 1968. Ehrlich artificially avoids this absurdity by assuming that the number of executions is

equal to one in years when it is actually zero.[10]

The two equations in Table C examine two different functional forms for the murder rate regression. Equation (i) is a linear rather than a log-linear form. It is striking that all the estimated coefficients in the linear form have the same sign as in the log-linear form, except for one: the estimated probability of execution, which is perversely positive though not significant, rather than negative and significant. Therefore Ehrlich's discovery of of a deterrent effect of capital punishment depends on a choice of functional form that is utterly arbitrary. This extreme sensitivity of the capital punishment deterrent result to functional form is further emphasized by equation (j) in which all variables except $(PXQ_1)_{-1}$ are in the log form. Again the coefficient of the execution variable is radically different than Ehrlich's equation.[11]

This sensitivity can be explained intuitively by Figure 1, which shows plots of PXQ_1 and the log of PXQ_1 over time. The radically different time shape coupled with the fact that the log is approximately linear over the range of the other variables (in particular the murder rate shown in Figure 2), implies the two forms will generate vastly different results.

IV. Interpretation of the Ehrlich Time Series Regressions

In this Section we abstract from the criticism of Sections II and III to examine another aspect of the analysis. Given that Ehrlich has correctly estimated the murder rate function, is it reasonable to infer a murder-execution tradeoff from the negative coefficient of $P^O_{e/c}$?

Ehrlich argues that this estimated coefficient $(\hat{a}_3)$ should be interpreted as an estimate of the partial elasticity of murder rates with respect to the risk of execution. Thus he is able to

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TABLE C. Specification Sensitivity

Equation	Constant	$\hat{P}^0_a$	$\hat{P}^0_{c/a}$	$(PXQ_1)_{-1}$	L	A	Y_p	U	T
(i) 1938-69	.194	-.406(-3)	-.595(-3)	.134(-2)	-.173	.133	.643(-4)	.629(-3)	-.205(-2)
R^2 = .941	(3.26)	(-0.81)	(-2.25)	(1.04)	(-2.16)	(1.78)	(3.26)	(1.40)	(-2.97)
SSR = .113(-3)									
$\hat{\rho}$ = .578									
(j) 1938-69	-5.411	-1.323	-0.435	0.012	-0.935	0.526	1.641	0.062	+0.032
R^2 = .936	(-0.81)	(-1.79)	(-2.40)	(0.55)	(-1.10)	(2.11)	(2.36)	(1.41)	(2.24)
SSR = .039									
$\hat{\rho}$ = .690									

Equation (i) is linear in all the variables, while equation (j) is log-linear in all the variables except $(PXQ_1)_{-1}$ and T which enter linearly. The method of estimation and notation is the same as in Table A. The integers in parenthesis next to the estimated coefficients in equation (i) indicate multiplication by that power of ten.

FIGURE 1

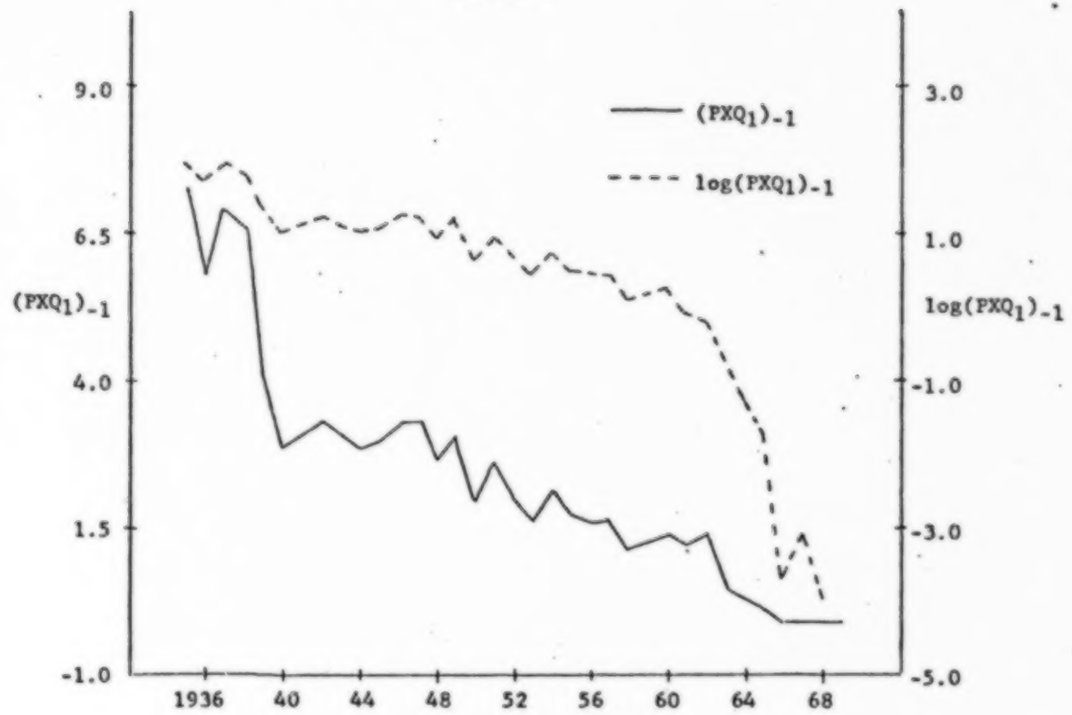
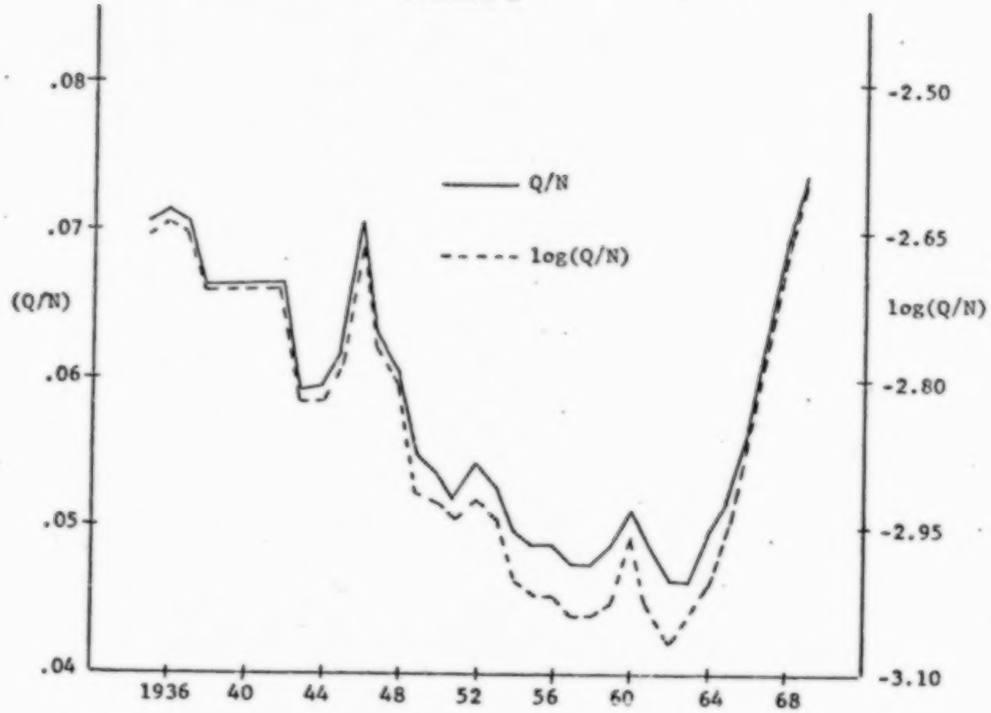


FIGURE 2



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derive the estimated marginal tradeoff between executions and murders: $\Delta Q/\Delta E = \hat{\vartheta}_3 (Q/E)$. If one assumes $\hat{\vartheta}_3 = -.065$ and Q and E equal to the time series mean values, $\Delta Q/\Delta E = -7.7$. For Q = 10,920 and E = 41, $\Delta Q/\Delta E = -17.3$.

It is important to note, however, that behind this interpretation of $\hat{\vartheta}_3$ lie several assumptions. The estimated murder supply function may be written as

$$\log (Q/N) = \hat{\vartheta}_1 \log (AR/Q) + \hat{\vartheta}_3 \log (E/C) + \ldots,$$

where AR = murders cleared through arrest, and C = convictions for murder. Note that the number of murders (Q) appears on both sides of the equation. Collecting terms and solving for log Q in terms of log E results in

$$\log Q = \hat{\vartheta}_3/(1 + \hat{\vartheta}_1) \log E + \ldots$$

Since $\hat{\vartheta}_3 < 0$ and $\hat{\vartheta}_1 < -1$, the elasticity of Q with respect to E appears to be positive! The logical root of this puzzle is not difficult to find. Ehrlich's calculation is implicitly based on the assumption that a hypothetical increase in executions will change AR by precisely the right amount such that

$$\hat{\vartheta}_1 \Delta \log (AR/Q) = 0$$

Our calculation is made with another assumption, i.e., that the number of crimes cleared through arrest would be unaffected by a change in E.

Presumably neither assumption is correct. We do not know what determines clearance rates for murder, but it is completely arbitrary to assume either adjustment in lieu of more information.

This near paradox suggests a more fundamental problem with the Ehrlich analysis. Social scientists interested in economic models of crime explicitly acknowledge the simultaneity of the system -- hence the logic of calling criminal behavior functions

supply functions. Ehrlich has met the technical requirements for econometric identification in his single estimated equation, but has left important questions about the operational meaning of what might be casually construed to be exogenous policy variables.

For example, consider the relationship between the conditional probability of conviction given arrest ($P_{c/a}$) and the conditional probability of execution given conviction ($P_{e/c}$). In order to interpret $\hat{\vartheta}_3$ as an elasticity, one must assume that conviction rates will be unaffected by exogenous changes in ($P_{e/c}$) -- presumably legal institutional changes affecting jury discretion in capital offense cases. Yet many legal experts and social scientists believe that increases in ($P_{e/c}$) will reduce ($P_{c/a}$), since juries and judges will apply stricter standards for convictions when there is a greater prospect of execution.[12] This widely accepted hypothesis was used successfully as an argument by 19th and early 20th century legal reform movement leaders bent on abolishing whole categories of capital crimes and granting juries greater discretion in penalties imposed.[13] By Ehrlich's estimated equation (3) in Table 3, if the absolute value of the elasticity of ($P_{c/a}$) with respect to ($P_{e/c}$), (ϵ_{ce}), were greater than .174, the net impact of an increase in execution probabilities would, perversely, raise murder rates. More generally, the impact will be perverse if $|\epsilon_{ce}| > \vartheta_3/\vartheta_2$. And, of course, all this ignores other possible relationships between variables on the right hand side of the supply equation.

This is not an uncommon problem in policy-oriented econometrics, where the focus is on predicting the implications of a policy rather than on correctly estimating individual equations in a structure. If the purpose of the investigation is to estimate the

impact of a change in an exogenous policy instrument, executions per conviction, then the relevant coefficient is the coefficient of the execution per conviction variable in the reduced form equation of the entire system.

Ehrlich acknowledges this point of methodology, and in fact estimates a "modified reduced form", achieving significantly negative estimates of q_3 for three of his four alternative estimators of $P_{e/c}$. One might note, however, that for the period 1938-1962 (using all the exogenous variables specified by Ehrlich), the estimated coefficient of log $(PXQ_1)_{-1}$ is insignificant; further, a similar equation using $(PXQ_1)_{-1}$ rather than log $(PXQ_1)_{-1}$ over the full sample 1938-69 also shows an insignificant estimated coefficient. We would place little weight on either Ehrlich's reduced form estimation or our own variant, since we have no faith that the variables chosen by Ehrlich represent the exogenous variables in the actual structure. On precisely these grounds, Ehrlich refrains from attempting to estimate the rest of the structural equations implied by his theory of crime and law enforcement.

Conclusion

This examination of Ehrlich's estimates has limited focus. One might wish to examine further the theoretical basis for including or excluding variables in the model, the relevance of the specific estimators chosen to test the hypothesis about capital punishment deterrence, the quality of the data (particularly for the deterrence variables P_a^o, $P_{c/a}^o$, $P_{e/c}^o$) used in the test, and the aggregation problems imposed by the use of national data.

We have essentially confined ourselves to a narrower analysis. First, we have shown that the estimates are extremely sensitive to

the time period chosen and to the mathematical form of the specification. This sensitivity raises grave (and in our own opinion, overwhelming) doubt about the utility of Ehrlich's time series estimates. Second, we have argued that even if Ehrlich has captured the essence of the murder rate function in his regression, it is not possible to infer from it that a change in legal institutions which increased $P_{e/c}$ would reduce murder rates.

In sum, on the basis of Ehrlich's research, it is prudent neither to accept nor reject the hypothesis that capital punishment deters murder. This, of course, does not mean that economic models and statistical inference have no role to play in diminishing our ignorance in this area. Answers, however, must await superior data which allows more conclusive hypothesis-testing.

Footnotes

* The authors would like to thank Phoebus Dhrymes, David Kennett, and Jacob Mincer for their comments and assistance.

1. Another difference is that civilian population (N) is used as an additional explanatory variable in the first stage of the regressions reported in Table 3 though there is no mention as to why this was done. Since more results are reported in Table 4, we focus on the form used in that table.

2. All tests of significance in this paper and in Ehrlich's are based on asymptotic distribution assumptions. Thus what are conventionally called t - ratios or F - ratios in the classical linear regression model will only approximately have the appropriate t or F distribution in these models.

3. The apparent sensitivity of Ehrlich's result to minor data variations is in itself disturbing. While we would not place great weight here on the significance of this sensitivity, we would nonetheless defend our estimation procedure and data set as being an accurate representation of Ehrlich's model. See the Appendix for a detailed description of how our variables are defined and the data sources used.

4. Ehrlich defines the labor force participation rate as the percentage of the noninstitutional population, 16 years of age and over, in the labor force throughout the sample period. In our series, for years prior to 1947, the base population includes persons 14 years and older. This distinction corresponds with unemployment rate series used by Ehrlich.

5. This alternative series excludes non-negligent manslaughter and is therefore a different estimate of the true conviction rate for capital offenses than observations based on the UCR data. We would, however, place as much confidence in these measures as in a presample extrapolation using the series beginning in 1936.

6. It should be noted that any error in measuring conviction rates is compounded in errors in the executions per conviction series, which requires an estimate of convictions based on conviction rates. See point 4 of the Appendix.

7. Ehrlich places great importance on the relative effect of these three probabilities as support for his theoretical analysis. The null hypothesis, that these coefficients are equal to each other, is not tested however.

8. We also estimated all equations using ordinary least squares with and without the serial correlation adjustments, since the benefit of using Ehrlich's two stage procedures is unequivocal only in large samples. We found the estimates do vary depending on the method used. However, in order to focus on more substantive criticism of Ehrlich's results, we use the same estimation procedure throughout this paper.

9. These values are 9.925, 3.899, and 3.593 for the samples ending in 1961, 1963 and 1964, respectively. The estimated coefficient for $(PXQ_1)_{-1}$ is positive in all samples, though only significant in the 1938-1961 sample, where coefficient is .1141 with a t - ratio of 3.251.

10. In replicating Ehrlich's model we also use this procedure. This approach implies that the variable representing probability of execution is actually the inverse of the number of convictions in those years. Even if Ehrlich drops these points from his sample he is still faced with the problem of post-sample prediction.

11. We might note that we did not need to experiment with numerous functional forms to detect this sensitivity.

12. See, for example, Vidmar (1972), Bedau (1967), Bennett (1958), Kalven and Zeisel (1966), Zeisel (1968), Knowlton (1953).

13. See, for example, Shipley (1909), and McCloskey (1973).

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APPENDIX: DATA SOURCES

This appendix gives sources for all data used in estimating the above equations as well as describing procedures for creating variables from the raw data and for estimating missing observations. Since Ehrlich (1975) does not provide such information, it is not possible to replicate his results exactly. However, it should be clear from examining this appendix that our choice of data and procedures conform to the descriptions of Ehrlich (1975). Units of measurement are also chosen to correspond, though in the log-linear regressions only the intercept will be affected by such choices.

VARIABLES:

1. Murder Rate, $(Q/N)^{o} = M/N$, where
   M = Number of murders and non-negligent manslaughters per year
   1933-69, Revised series provided by the Uniform Crime Reporting Section of the U.S. Federal Bureau of Investigation,
   N = Civilian population in 1000's,
   1933-57, HS, Series A3,
   1958-69, CPR, P-25, No. 442.

2. Clearance Rate for Murder, P^{o}_{a}, percentage of murders and nonnegligent manslaughter cleared by arrest,
   1933-69, UCR, Annual Bulletin.

3. Conviction Rate for Murder, $P^{o}_{c/a}$, percentage of persons found guilty as charged for murder and nonnegligent manslaughter,
   1936-69, UCR, where two estimates are presented the estimate based on the larger sample was chosen; 1961 was interpolated linearly from the 1962 and 1963 estimates,
   1933-35, JCS, (figures exclude nonnegligent manslaughter).

4. Execution Rate, $(PXQ_1) = (E/Q \cdot P^{o}_{a} \cdot P^{o}_{c/a}) \cdot 10^{6}$ where,
   E = One year lead of the number of executions for murder
   1934-70, NPS, Bulletin No. 46, Aug. 1971, Table 1,
   Q, P^{o}_{a}, and $P^{o}_{c/a}$ are as defined in 1, 2, and 3 above.

5. Labor Force Participation Rate, L = CL/(NN-TL+CL) where,
   TL, CL = total and civilian labor force in 1000's,
   1933-69, EE, Table A-1,
   NN = total noninstitutional population 14 years of age and over before 1947 and 16 and over since 1947 in 1000's,
   1940-69, EE, Table A-1,
   1933-39, Total population 14 and over times (.988), the ratio of the 1940 noninstitutional population 14 and over to the 1940 population 14 and over HS, Series A22, A27.

6. Unemployment Rate, U,
   1933-69, EE, Table A-1.

7. Fraction of the Resident Population between 14 and 24, A=NY/NR where,
   NY = number of persons between 14 and 24 years of age in the resident population in 1000's,
   1933-39, HS, A28,
   1940-59, CPR, P-25, Nol 98,310. No. 311 contains estimate for total population,
   1960-69, CPR, P-25, No. 519,
   NR = Resident Population in 1000's,
   1933-50, HS, Series A2,
   1951-60, HSS, Series A2,
   1961-69, CPR, P-25, No. 519.

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1. Current Population Reports, (CPR) U.S. Bureau of the Census
2. Employment and Earnings, (EE) U.S. Bureau of Labor Statistics.
3. Economic Report of the President, (ERP), 1970.
4. Historical Statistics of the U.S., (HS), U.S. Bureau of the Census.
5. Supplement to HS, (HSS), U.S. Bureau of the Census, 1962.
6. Judicial Criminal Statistics, (JCS), U.S. Bureau of the Census.
7. National Prisoner Statistics, (NPS), U.S. Department of Justice; prior to 1950, U.S. Bureau of the Census
8. Statistical Abstract of the U.S. (SA), U.S. Bureau of the Census.
9. Survey of Current Business, (SCB), U.S. Department of Commerce.
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